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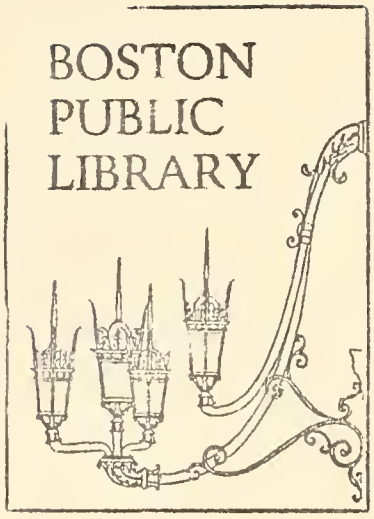
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A SURVEY
OF THE HIGH SCHOOLS OF BOSTON
TO DETERMINE UP-TO-DATE CAPACITIES,
AND TO INDICATE THE SCOPE OF THE NEED FOR
NEW CONSTRUCTION

BOSTON PUBLIC LIBRARY

SUBMITTED TO

THE PUBLIC FACILITIES DEPARTMENT

OF THE CITY OF BOSTON

BY

EDUCATIONAL PLANNING ASSOCIATES, INC.
54 Lewis Wharf, Boston, Mass.

July, 1970

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I. INTRODUCTION

INTRODUCTION

BACKGROUND AND PURPOSE

This report constitutes the second part of a study of Boston's high school needs through the decade 1970-80. The study has been undertaken jointly by Educational Planning Associates, Inc., who are acting under contract to the Public Facilities Department, and by the Planning Department of the Boston Redevelopment Authority. In addition, the Educational Planning Center of the Boston School Department has contributed its advice and assistance.

To put this report in perspective, we should reiterate that the purpose of the study as a whole is to provide some recommendations concerning the need for additional new high schools in Boston--beyond what is currently planned. This means that we shall have to think about how many new schools are required, what kinds of schools they should be, how many students should be assigned, and where the schools should be located. These considerations also force us to reexamine and reevaluate the existing high schools.

In the first part of the study, the Planning Department of the BRA worked out projections of high school enrollment for the 1970-80 period.

The present report makes a comprehensive review of the capacities of the existing high schools--which are examined not only in terms of how much space is available, but also in terms of the types of spaces available, and their educational quality. At the conclusion of the report, we shall put together the results of our analysis of enrollment projections, high school capacities, and current plans for high school construction, in order to indicate the scope of the need for additional construction, beyond what is planned.

BASIC PROCEDURES FOLLOWED IN DETERMINING CAPACITIES

Prior to our survey, the most recent examination of the physical aspects of Boston's high schools had been conducted as part of the BRA-sponsored Sargent Report in 1962. Among other things, the Sargent Report's analysis of the high schools included a series of computations which resulted in an estimate of the capacity of each school.

Using the Sargent Report's figures as a starting point, we have undertaken to bring the capacity figures up-to-date. We have gone through two distinct processes in doing so:

(1) First, we have simply up-dated the Sargent Report computations, which essentially totaled the number of teaching spaces in each school and assigned so many students to each space.

(2) Second, we have added another--vitally important--dimension to the picture, which was not taken into consideration when the Sargent capacity figures were arrived at. That is, we have considered the adequacy of certain specialized facilities--such as science labs, libraries, gymnasiums, etc.--in terms of size and educational quality, bearing in mind how many students are being served, and the nature of the programs being implemented.

The result of the first of the two processes described above we have labeled the "Recomputed" Capacities of the schools. The end result of both processes we have labeled the "Actual" Capacities of the schools. It is the "Actual" Capacities which must be used in calculating the future need for high school seats.

The thinking which let to our conclusions with regard to "Recomputed" and "Actual" Capacities will be explained in detail in the following pages, and in fact constitutes the major portion of this report. At this point, however, we should emphasize that our revised capacity figures do not assume any radical changes either in the curricula or in the organization of the existing high schools. Moreover, we feel that in general our approach has been on the conservative side. We have tried to come up with a capacity for each school which will not strain its facilities, but we have not, for instance, taken the position that the capacity of the gymnasium should determine the capacity of the school.

PHYSICAL CONDITION OF EXISTING HIGH SCHOOLS

The question of the capacity of a school involves a consideration of its physical condition as well as the number and types of its spaces. Consequently, in addition to calculating up-to-date capacity figures, we have also put together some data, observations, and recommendations concerning the physical condition, the environment, and --to a more limited extent--the equipment and furnishings of the high schools.

We shall devote a sub-section of our report to speaking generally about these matters, and in particular about the urgent need for rehabilitating certain schools. In addition, problems which are specific to a particular school will be described in Appendix B. However, we should make it clear that our inspection of the physical conditions of the schools was not a comprehensive one. We have attempted to identify and emphasize only major problems requiring immediate solutions.

METHODOLOGY

Our survey of the city's high schools took the form of a visit to each of the schools--except for four that were already scheduled for replacement[1]--as well as a review of the following materials:

1. Reports of the Visiting Committees of the New England Association of Colleges and Secondary Schools covering the four schools evaluated so-far during the 1969-70 period. These schools are the Jeremiah E. Burke, Hyde Park, Jamaica Plain, and Roslindale.

2. Reports submitted as part of the BRA-sponsored Boston School Study Project of Harvard University (under the direction of Dr. Cyril Sargent) in 1961-62. These included individual evaluations of the schools in which we are interested, based upon visits to the schools, and the final over-all document, generally known as the "Sargent Report."

3. Report entitled "Major Alterations and Repairs Program for Boston Public Schools," submitted to the Boston School Committee on June 5, 1969, by Mr. Anthony L. Galeota, Chief Structural Engineer, Department of Planning and Engineering, Boston Public Schools.

---

[1]English High, Charlestown High, and the two Trade Schools.

4. Statistical data provided by the Data Processing Center of the Boston Public Schools, including several analyses of course enrollments at the high schools, undertaken at recent dates; and a master schedule of course assignments and room utilization, by high school, dated March 5, 1970.

5. Statistical data provided by the Department of Planning and Engineering, Boston Public Schools, including the "Annual Report of the Superintendent of Construction of the Department of School Buildings," for the period ending December 31, 1965. (This document provides some basic statistics on all public school buildings in the city.)

The visits to each school were undertaken by one or more staff members of Educational Planning Associates, a representative of the school department's Educational Planning Center, and a consultant engineer under contract to the Public Facilities Department.

Each visit included an interview with the head master (in order to have the benefit of his or her personal evaluation of the school's facilities), and a tour of school spaces in the company of one or more of the school staff. After the visit, two reports were drawn up: one consisted of data and observations recorded by Educational Planning

Associates personnel; the other of data, observations and recommendations on the part of the consultant engineer.

These reports--which include information derived from discussions with the head masters and other school personnel--constitute the basic source material of this document.

II. REVISION OF HIGH SCHOOL CAPACITIES

REVISION OF HIGH SCHOOL CAPACITIES

CAPACITY--RATIONALE

The rationale for calculating present capacities of the high schools was based on finding an overall student enrollment consistent with educational quality, both in terms of the available general classroom space, and the fixed, specialized spaces in each school.

In attempting to calculate more accurate pupil capacities for Boston's high schools, we determined how many learning spaces there are in each school, and how many students these spaces can reasonably accommodate. The spaces considered at this point were general classrooms, and the more specialized instructional spaces, such as science rooms, gyms, and shops. We computed the capacities by assigning a desired class size based upon the area and the function of each space. This analysis became the first step in determining the actual capacity of each school. We have labeled it the "Recomputed" Capacity, since, in effect, it was a computation based on number of rooms and desired class size. The actual computation and numbers used will be explained below in the section on Recomputed Capacity.

We found, however, that this recomputation was inadequate in itself to give us an accurate estimate of school capacities that were consistent with modern, high quality, educational programs of satisfactory variety

and depth. This arises from the fact that most, if not all, of the more specialized activities do not have nearly enough space to function properly. It was for this reason that we considered the "Recomputed" Capacity to be an intermediate step in determining actual school capacities, and we proceeded to a second step (going beyond what was done in the Sargent Report). We examined the specialized facilities in each school to ascertain how much more space would be required for them to function effectively. And, in addition to identifying those areas in which space was insufficient, we found also that an allowance had to be made for specialized facilities that were entirely absent in specialized activity areas, e.g., Music. Since each school has a fixed amount of space, any expansion of specialized facilities will subtract from available general classroom space, thus lowering capacity further than indicated by the recomputation. The procedures followed for determining how this affects actual capacity are described in the section on "Actual" Capacity. It should be recognized that this second step in our methodology was given greater weight in deriving a realistic capacity figure.

In conclusion, the final, "Actual" Capacity was based on a judicious estimate of how many students could be comfortably and adequately served by an existing building, given its present space limitations.

RECOMPUTED CAPACITY

The data collected during visits to the twelve Boston high schools included in this study enabled us to determine the number and kind of instructional spaces in each school. This was checked against the corresponding information in the background data from the Sargent Report, and adjustments were made where necessary.

We adopted the basic methodology employed by the Sargent Report to determine room capacities. Its basis is the following formula:

Number of activity spaces x standard average class size assigned to that activity x utilization factor = capacity

Our lower figures for standard class sizes were based on recommendations contained in the Boston Teachers' Union-Boston School Committee Agreement covering the 1969-70 school year, on recent reports of the New England Association of Colleges and Secondary Schools Accrediting Committees, and, in the case of Physical Education spaces, on the Massachusetts Association for Health, Physical Education and Recreation and Massachusetts School Buildings Assistance Commission joint report on school facilities, dated 1966. In most cases, we used a lower standard class size than that found in the Sargent Report.

Chart II A, following, indicates the standard class size assigned to each type of space and a comparison with the class sizes used in the Sargent Report calculations.

CHART II A

RECOMPUTED CAPACITY STANDARDS

SPACE	STANDARD CLASS SIZE USED	UTIL. FACTOR*	SARGENT CLASS SIZE
GENERAL CLASSROOM		85%	
Reg. 750-900 s.f.	28		30
Small 750 s.f. or less (Seminar-type)	20		25
Large Lecture Room 1200 s.f.	50	50%*	--**
SPECIAL CLASSROOMS		80%	
Steno	28		30
Other Business CR's	28		30
Typing	25		--
Business Machines	20		20
Art	20		24
Mechanical Drawing	20		24
Home Economics	20		24
Merchandising	20		20
Non-Vocational Shop	20		24
Gym	30		30
Science Demonstration Class	28		30
Biology Lab	28		30
Study Hall	***		--
Chemistry Lab	24	70%	24
Physics Lab	24	70%	24
Vocational Shops	same capacities as Sargent @ 100% utilization		

*All utilization factors are the same as those used by Sargent with the exception of the 50% utilization factor used for Large lecture space.

**The Sargent Report did not calculate the capacity of Large lecture space.

***Capacity assigned according to floor area.

CLASS SIZES.

The class sizes which we used were determined by the areas and functions of the particular spaces, as follows:

Regular Classrooms. In most schools, regular classrooms were found to vary between 750 and 900 square feet. A notable exception is the Jeremiah E. Burke, where the regular classrooms measure only about 715 square feet. We calculated a standard class size of 28 for regular classrooms. Our decision was influenced in large part by the Teachers Union-School Committee Agreement which we refer to above. That Agreement stated that the maximum class size for a regular classroom should be 31. We concluded that if the maximum figure is to be 31, then the average should be no more than 28. (It should be noted that the Visiting Committees of the New England Association of Colleges and Secondary Schools were somewhat less conservative--they recommended an average of 25 students per class.) Because of the small classroom size at the Jeremiah E. Burke, mentioned above, a class size of 25 was assigned to general classrooms at that school.

Business Education classrooms (except where Typing or business machine courses were involved) and science demonstration rooms--as opposed to science laboratories--were considered to have the same capacity as regular classrooms.

Seminar Rooms. In a few instances, we found classrooms ranging in size from about 500 to about 700 s.f. These rooms were assigned an average class size of 20.

Large Group Lecture Rooms/Study Halls. Classrooms of 1,200 s.f. or more were regarded as lecture rooms, and were assigned a class size of 50. Large rooms used as study halls were assigned a class size consistent with their square footage.

Science Laboratories, Art Rooms, Mechanical Drawing Rooms, Home Economics Rooms, Business Machine Rooms, Shops. Except in the case of Biology Laboratories, all of these specialized spaces were assigned class sizes under 28.

Gymnasiums. Consistent with the methodology utilized in the Sargent Report, a gym of from 3,000 to 6,000 s.f. was considered to have one teaching station of 30 students. A gym larger than 6,000 s.f. was considered to have two teaching stations of 30 students each.

UTILIZATION FACTORS.

The room utilization factors employed by the Sargent Report were considered consistent with current use and were therefore incorporated into our computations as follows:

General classroom spaces were assigned a room utilization factor of 85%; Chemistry and Physics Labs a factor of 70%; Vocational Shops a factor of 100%; and all other specialized spaces a factor of 80%. In addition, we assigned

a factor of 50% utilization to Lecture rooms. (Sargent did not compute the utilization of lecture spaces.)

In computing the capacities of Vocational Shops, we again used Sargent's methodology, which was based on the available floor area per student. The amount of floor area considered adequate varied according to the activity. The same capacities were assumed. Sargent made one exception which we too adopted. In the case of Boston Technical High School, all shop capacities were computed with a standard class size of 30 and a utilization factor of 90% (instead of 100%). This distinction was made because the shops at Tech are non-vocational, and experience shows that they are less tightly scheduled than vocational shops.

Chart II B shows how the recomputation was applied to each school. The statistics for each school are divided into three columns. Under each school, Column (1) indicates the number of spaces now assigned to each activity area. Column (2) shows the number of pupil spaces available in each area (found by multiplying the number of spaces in (1) by the standard class size). Column (3) shows the student capacity for each activity area (found by multiplying (2) by the applicable utilization factor).

The spaces at each school are designated according to the activity areas listed above and in Chart II A. The activity category OTHER on the Chart II B refers to additional special-

ized spaces which influence capacity, such as a language lab at Boston Latin, remedial reading rooms at Girls High; and, at the Jeremiah E. Burke, 3 small seminar-type rooms with a class accommodation of 15 per room were included in this category.

The Jeremiah E. Burke has the only Choral Practice room in the city used as such. We calculated its capacity at 30 students at 50% utilization, or a student capacity of 15. It is listed under the Burke in the activity category OTHER. Other music spaces were not considered in the recomputation. The few schools that have music space have rooms that are painfully small or ill-equipped. (See Appendix A; for present course enrollments in Music see Appendix D.)

ACTIVITY AREAS	class si	utiliza. factor	BOSTON LATIN No. rms.	pupil spaces (2)	cap (3)	BOSTON TECH No. rms.	pupil spaces	cap.	BRIGHTON No. rms.	pupil spaces	cap.	DORCHESTER No. rms.	pupil spaces	cap.	EAST BOSTON No. rms.	pupil spaces	cap.
CLASSROOMS SMALL <750 s.f.	20	85%	(1)												10	200	170
REGULAR	28	"	71	1988	1692	45*	1260	1071	32	896	762	21**	588	500	32	896	762
LECTURE ROOMS	50	50%	2	100	50	1	50	25							1	50	25
BUSINESS	28	80%							1	28	22						
TYPING	25	"							3	75	60	3	75	60	4	100	80
BUSINESS MACHINES	20	"							2	40	32	2	40	32			
MERCHANDISING	20	"										1	20	16			
ART	20	"	--UNKNOWN			1	20	16	2	40	32	3	60	48	1	20	16
MECHANICAL DRAWING	20	"				5	100	80	1	20	16	1	20	16	2	40	32
HOME ECONOMICS	20	"							3	60	48	2	40	32	2	40	32
STUDY HALL	-	"	2	100	80										2	80	64
NON-VOCATIONAL SHOP	20	"													2	40	32
GYM	30	"	2½	75	60	2	60	48	2	60	48	2	120	96	1	30	24
SCI. DEMON. CLASS	28	"	3	84	67	4	112	90	3	84	67	2	56	45	2	56	45
BIOLOGY LAB	28	"	4	112	90	2	56	45	1	28	22	3	84	67	2	56	45
OTHER		"	1	28	22												
CHEMISTRY LAB	24	70%	1	24	17	2	48	34	1	24	17	1	24	17	1	24	17
PHYSICS LAB	24	"	1	24	17	2	48	34	1	24	17	1	24	17	1	24	17
VOCATIONAL SHOP	-	100%				15	450	405	5		68	5		42	4		82
RECOMPUTED CAPACITY					2095			1848			1211			988			1443

-20-

GIRLS HIGH			GIRLS LATIN			HYDE PARK			JAMAICA PLAIN			J.E. BURKE			ROSLINDALE			SOUTH BOSTON		
No. rms.	pupil spaces	cap.	No. rms.	pupil spaces	cap.	No. rms.	pupil spaces	cap.	No. rms.	pupil spaces	cap.	No. rms.	pupil spaces	cap.	No. rms.	pupil spaces	cap.	No. rms.	pupil spaces	cap.
5	100	85	3	60	51				2	40	34							4	80	68
14	392	333	36	1008	857	31	868	738	20	560	476	26**	650	553	29	812	690	25	700	595
2	100	85**	3	150	127**															
									1	28	22	4	112	90						
3	75	60				3	75	60	2	50	40	4	100	80	3	75	60	3	75	60
1	20	16				1	20	16	1	20	16				2	40	32	2	40	32
									1	20	16	1	20	16						
2	40	32	1	20	16	2	40	32	2	40	32	2	40	32	2	40	32	2	40	32
						2	40	32							1	20	16	2	40	32
1	20	16				3	60	48	1	20	16	4	80	64	1	20	16	3	60	48
						3	150	120							1	50	40	1	70	56
						2	40	32	1	20	16							3	60	48
1	30	24	1	30	24	2	60	48	1	30	24	1	60	48	1	30	24	2	60	48
						2	56	45	1	28	22	3	84	67	2	56	45	2	56	45
2	56	45	4	112	90	2	56	45	2	56	45	2	56	45	1	28	22	1	28	22
2	40	32										1 3	30 45	15 36						
1	24	17	1	24	17	1	24	17	1	24	17	1	24	17	1	24	17	1	24	17
1	24	17				1	24	17	1	24	17	1	24	17	1	24	17	1	24	17
						4		72										3		38
		762			1182			1322			793			1080			1011			1158

CHART II B

FOOT NOTES -- CHART II B

*Includes 4 Science Demonstration Classrooms for which a utilization factor of 85% has been assumed.

**Does not include 12 temporary classrooms now located outside the main building.

***Computed at 85% utilization, because Lecture Rooms are used as general classrooms.

**Class size of 25 assigned, because all Regular Classrooms are smaller than average (about 715 s.f.), and could not comfortably accommodate the regular class size of 28. Although under 750 s.f., they were not assigned a seminar class size of 20, because they are the regular classroom unit.

***Computed with a standard class size of 30 at 90% utilization, the same procedure used by Sargent.

ACTUAL CAPACITY

In the preceding section we showed how we recomputed the up-to-date capacity of each high school, simply by assigning a certain number of students to each teaching space. Our recomputation dealt strictly with the existing spaces in the schools.

The next phase of our efforts was directed first toward an identification of space inadequacies in certain vital specialized areas. We then calculated how much additional space would have to be provided in each school in order to compensate for these inadequacies. In so doing, we tried to be realistic. We assumed, for instance, that additional space would not be provided by constructing annexes to the present buildings--with the possible exceptions of Boston Latin School and Dorchester High. Site limitations would appear to preclude such a solution. This meant that the additional space required must be deducted from general classroom space. And, obviously, this process could not be carried out without a further substantial reduction in the capacity of each school. Consequently, we aimed not at optimal solutions, but rather at solutions which would provide each school with the minimum amount of specialized space required for the effective support of the school's programs.

Finally, having identified the space inadequacies and determined how much general classroom space must be deducted to compensate for them, we adjusted the Recomputed Capacity figures accordingly, arriving at the Actual Capacity of each school.

This process is described in detail in the following pages.

1. CRITERIA USED IN DETERMINING ACTUAL CAPACITY

The specialized areas which we found consistently inadequate in terms of space during our survey of the high schools are the following:

Libraries

Science (especially laboratories)

Physical Education

Art

Music

Guidance

Staff Spaces--
- Lounge and conference Room
- Teachers' Offices and Storage
- Dining

Administration Offices

Health Suite

Cafeteria and Kitchen

Of course, when we speak of space "inadequacies" we are making a comparison against more or less generally accepted criteria. The criteria which we have utilized are derived from a number of professional publications devoted to the planning of school spaces, and from data relating to the two new Boston high schools which are now under design--the Madison Park High School and the new English High School. Where criteria advocated by professionals appeared utopian, we substituted more modest objectives that seemed to be practicable and realizable within existing constraints.

The following paragraphs discuss the criteria used in connection with each of the specialized areas to determine where space inadequacies exist. (A more complete review of this subject is contained in Appendix A.)

a. Libraries. The recent standards promulgated jointly by the American Library Association and the National Education Association call for library reading rooms accommodating 15% of a school's student body, at 40 s.f. per student. (Standards for School Media Programs, 1969, p. 40.) This requirement seemed unattainable, given the size of present high school libraries in Boston. Instead, we considered that an adequate school library should accommodate a minimum of 10% of the school population at any one time, and provide minimum reading space of 30 s.f. per student. Library space of 2400-3000 s.f. was considered a minimum for any school.

b. Science. There should be separate laboratories for chemistry, physics, and biology. Labs should accommodate 24-25 students, ideally at 50 s.f. per student in 1,200 s.f. of work area. (The National Science Teachers Association, School Facilities for Science Instruction, 1961, p. 21, recommended a minimum standard of 50 s.f. per student for all science labs, including preparation, accessory space, and storage.)

c. Physical Education. classes should not exceed 30 students per teaching station. (Massachusetts School Buildings Assistance Commission, Physical Education Facilities and Basic Equipment: Secondary Schools, 1966, Introduction.) Indoor gym facilities should provide a minimum of 100 s.f. of activity area for each student participating in physical education at any one time. (The American Association for Health, Physical Education, and Recreation, Planning Areas and Facilities for Health Physical Education and Recreation, 1965, p. 90, set a standard of 125 s.f. per student of activity area.) In addition to one full-sized basketball gym, smaller spaces may handle other kinds of gym activity such as weight training or fencing.

An adequate gym program presupposes a functional locker, dressing, and shower area. This will necessitate a space allowance over and above the 100 s.f. per student for activity area.

d. Art. Spaces should allow a variety of art activities, and ideally should accommodate 20 students (Accrediting Committee Reports) in 1,200 s.f. of work area with adequate additional space for storage. (New England School Development Council, NESDEC, The Road to Better Schools, 1955, p. 66, sets a standard of 1,100-1,300 s.f. per art room, plus storage, for 25 students.)

e. Music. Adequate variety in Music course offerings requires some specially equipped and sound-proofed space in addition to the school auditorium. At least one classroom equivalent of 800-900 s.f. was considered necessary.

f. Guidance. Adequate space should be provided each guidance counselor for private consultation in offices not less than 150 s.f. per counselor, including conference and testing space. Additional space for waiting and browsing should also be provided at a minimum of 200 s.f. A general standard of not less than 800 s.f. for 4 counselors was applied in each school. (NESDEC, p. 77, sets the standard of 120-150 s.f. per counselor for office space, and 200-500 s.f. for browsing.)

g. Staff Space. A healthy and efficient academic atmosphere depends in part on facilities and amenities offered to staff. Thus, sufficient office space (especially for heads of departments), conference rooms, and faculty lounge areas are imperative, as is a private faculty dining area. Our standard was faculty lounge 400 s.f., offices 150 s.f.

h. Health Suite. Each school should have a well-equipped Health Suite, providing privacy and reasonable comfort for students who are ill, adequate toilets, a separate examining room, and a nurse's office and waiting area. A minimum of 700 s.f. is considered necessary. (NESDEC, p. 78.)

i. Cafeteria and Kitchen. Comfortable and relaxed dining accommodations should be provided for students, and all cafeterias should be served by kitchens adequate in size to function efficiently and with adequate storage space.

2. CALCULATION OF SPECIALIZED SPACE NEEDS

As has been pointed out, we assumed that the additional space required for specialized areas could be provided only at the expense of existing general classroom space. Consequently, we had to convert each space deficiency into classroom equivalents. Since the average classroom in the schools we visited measured approximately 800 s.f., we resorted to the following standard:

a space deficiency of 800 s.f. required the deduction of one general classroom;

a space deficiency of 1,200 s.f. required the deduction of one and a half general classrooms;

and so forth.

In each school, those classroom equivalents required to compensate for the deficiencies were totaled; this sum

was converted into a capacity figure, which was subtracted from the Recomputed Capacity. In effect, each classroom equivalent eliminated the capacity of one general classroom at 85% utilization: 28 students x .85 = 24 students.

Particularly in the areas of Science, Art, and Music, existing spaces were found to be not only of insufficient size but of insufficient number. Involved in the calculation of space inadequacies with regard to these areas was the question of what percentage of the student body of each school would be likely to enroll in these subjects if more varied and improved facilities were available. We assumed that better facilities would increase enrollment, at least to a modest extent. As a result, we estimated enrollments of 70% in Science and 20% in Art, which are slightly above the present averages for the 12 schools included in the survey.

As for Music, the present enrollment is very low--about 3% in Music Appreciation and about 3% in vocal and instrumental practice--which we attribute in large part to the fact that only 3 of the 12 schools have any spaces allocated to Music (except for the auditorium). In the absence of any precise guide, we decided simply to assign one classroom equivalent to Music in each of the 9 schools which lack specific Music space.

(Appendix D contains statistics concerning the percentages of students in Boston high schools currently enrolled in Science, Art, and Music, as well as Physical Education.)

The number of Science spaces required in each school was determined by multiplying the percentage of the student enrollment taking Science (70%) by the proportion of the week allocated to Science (5 periods out of 35), divided by the average class size times a 70% utilization factor.

Assuming, as an example, a school of 1,000 students, one arrives at the conclusion that six Science rooms are required--that is, one room for every 170 students:

$$(1) \quad \frac{.70\ (1000) \times 5}{24 \times 35 \times .70} = 6 \text{ spaces}$$

$$(2) \quad \frac{1000 \text{ students}}{6 \text{ spaces}} = 170 \text{ students/space}$$

A similar calculation for Art, assuming 20% student enrollment (but using 20 students per class and an 80% utilization factor) results in the finding that a school of 1,000 students requires 2 Art studios. However, our space allocations for Art did not include extra provision for "Art majors," or for special projects requiring extensive work-in-process storage.

In several cases, after making provision for special facilities, we found that we did not have enough general classrooms. As a result, we had to make a further deduction in capacity to compensate for that fact.

The specific deficiencies which were taken into account in determining the Actual Capacity of each school are indicated by cross-marks in Chart II C, which is in three parts:

Part 1 is a graphic display of the areas in which space deficiencies occur in each school. A deficiency, in this sense, is determined by the inadequacy of the existing facility to serve the Recomputed Capacity of the school. And it may refer either to the size of a single space or to the number of spaces available for a particular activity. (For a discussion of the deficiencies found in each school, the reader is referred to Appendix B.)

Similarly, Part 2 of Chart II C displays inadequacies in the quality of certain areas in each school. By inadequacies in quality we refer, for instance, to conditions such as the following: art rooms without wash basins; classrooms with poor furniture or lighting; classrooms lacking blackout curtains; science laboratories without operable utilities; libraries with inadequate book collections; gyms without adjoining shower and locker facilities; antiquated or inadequate food preparation and storage equipment in kitchens, etc.

We should emphasize that no subtractions from Recomputed Capacity were made for deficiencies in quality. However, we felt some indication of the quality of specialized

areas would provide the reader with a more comprehensive view of the need for rehabilitation in the city's high schools.

Part 3 of Chart II C indicates the number of classroom equivalents in each school that must be subtracted from the Recomputed Capacity in order to make up for deficiencies in the specialized areas. The result of this subtraction is the Actual Capacity of the school.

The capacity equivalent is not always equal to the difference between the Recomputed and the Actual Capacity due to rounding off and small blanket reductions for physical education space.

DEFICIENCIES IN AMOUNT OF SPACE

SPACES INADEQUATE IN EITHER SIZE OR NUMBER
INDICATES EXISTENCE OF INADEQUACY, NOT EXTENT

SCHOOL / SPACE	BOSTON LATIN	BOSTON TECH	BRIGHTON	DOR-CHESTER	EAST BOSTON	GIRLS HIGH	GIRLS LATIN	HYDE PARK	JAMAICA PLAIN	J. E. BURKE	ROSLIN-DALE	SOUTH BOSTON
LIBRARY	X	X	X	X	X	X	X	X	X	X	X	X
SCIENCE LAB	X		X		X	X	X	X	X	X	(2)	X
GYM	X	X	X		X	X	X	X	X	X	X	X
P.E. LOCKERS		X	X		X	X	X	X	(2)	X	X	X
ART	X	X	X		X	X	X	X		X	X	X
MUSIC		(1)	none	none	none	none	none	none (1)	none (1)		X	none
GUIDANCE		X	X	X	X		X	X	X	X	X	X
STAFF LUNCH	none	none	none	none	none		none	none	none	none	X	X
STAFF OFFICE	X		X	X	X		X	X	X		none	X
ADMINISTRATION				X						X		X
HEALTH SUITE	X		X	X			X	X	X	X	X	X
CAFETERIA			X			X	X	X	X	X	X	
KITCHEN			X			X	X	X	X	X	X	X
STORAGE							X					
AUDITORIUM												
GENERAL CR		X						X	X			
AUDIO-VIS. (CR)												
TYPING	none						none					
TOILETS									X			
CUSTODIAL									X			X

(1) no courses offered (2) under construction

DEFICIENCIES IN QUALITY OF SPACE

SCHOOL / SPACE	BOSTON LATIN	BOSTON TECH	BRIGHTON	DOR-CHESTER	EAST BOSTON	GIRLS HIGH	GIRLS LATIN	HYDE PARK	JAMAICA PLAIN	J.E. BURKE	ROSLIN-DALE	SOUTH BOSTON
LIBRARY		X	X			X			X		X	
SCIENCE LAB	X	X	X	X	X	X	X	X	X			X
GYM		X	X		X		X		X			
P.E. LOCKERS	X	X	X	X		X		X		X	X	X
ART		X	X	X	X	X	X	X	X	X		X
MUSIC	X	X								X	X	
GUIDANCE						(3)			X			
STAFF LUNCH						X					X	X
STAFF OFFICE												
ADMINISTRATION						X						
HEALTH SUITE	X	X	X	X			X			X		X
CAFETERIA	X				(3)							
KITCHEN			X			X		X	X	X		
STORAGE												
AUDITORIUM		X	X		X		X	X	X	X	X	
GENERAL CR		X			X							X
AUDIO-VIS.(CR)		X	X	X	X	X						X
TYPING					#							
TOILETS	X	X	X		X	X	X	X	X		X	X
CUSTODIAL												X

(3) Space divided and inconvenient

CHART II C Part 2

SPACE NEEDS TRANSLATED INTO CLASSROOM EQUIVALENTS

SCHOOL / SPACE	BOSTON LATIN	BOSTON TECH	BRIGHTON	DOR-CHESTER	EAST BOSTON	GIRLS HIGH	GIRLS LATIN	HYDE PARK	JAMAICA PLAIN	J.E. BURKE	ROSLIN-DALE	SOUTH BOSTON
RECOMPUTED CAP.	2095	1848	1211	988	1443	762	1132	1322	793	1080	1011	1158
LIBRARY	2½	2	1	2		1	2	1	2	2	3	3
SCIENCE LAB	4		3		2	1	2	2	2		2	3
ART	1½	1	1		3	1	1	1		1		1
MUSIC			1	1	1	1	1	1	1		1	1
GUIDANCE		½	½				½	½	½	½		
STAFF LUNCH		1			1				1	1	1	
STAFF OFFICE	1		1				1		½		½	1
ADMINISTRATION				½						½		
HEALTH SUITE	½		½	½				½	½	½	½	
KITCHEN						1						
GENERAL CR		2						2	2			
TYPING	1						1					
TOTAL CR EQUIV.	10½	6½	8	4	7	5	8½	8	9½	5½	8	9
(BLANKET REDUCTIONS FOR P.E. SPACE) *	45		21					32	67		21	
CAPACITY EQUIV.	250	155	190	95	167	119	202	190	226	131	190	214
ACTUAL CAP.	1800	1700	1000	900	1300	650	980	1100	500	950	800	950

* CAPACITY EQUIVALENT NOT ALWAYS EQUAL TO DIFFERENCE BETWEEN RECOMPUTED AND ACTUAL CAPACITY DUE TO ROUNDING OFF AND BLANKET REDUCTIONS

Physical Education spaces and Cafeterias had to be treated differently from the other specialized facilities, for it seemed to us impractical to assume that such facilities could be expanded through the conversion of general classroom space. Consequently, we merely sought to establish whether or not these facilities would be grossly overcrowded even at Actual Capacity.

In view of the state requirement that each student participate in 3 periods of Physical Education per week, and given a school week containing 35 periods, one may calculate that about 10% of the student body of a given school will be involved in Physical Education activity at any one time. And using a figure of 100 s.f. for each participating student, one may then determine the total exercise space required for that school, and compare the results with the existing situation.

As a result of such calculations, we determined that, even at Actual Capacity, all of the schools included in the survey--with the exception of Dorchester High--ought to be provided with another standard-size gym (or the equivalent). In addition, all of the schools require expansion and/or improvement of their Physical Education shower and locker spaces. (See Chart II D for details concerning the need for additional Physical Education space at each school, and Appendix D for figures relating to enrollment in Physical Education.)

In the case of two schools, Boston Latin and Jamaica Plain High, we felt the overcrowding of the gyms was such as to warrant a sizeable blanket reduction in each school's capacity: at Boston Latin we reduced the capacity by 45, and at Jamaica Plain High by 67. Similar blanket reductions --but on a much smaller scale--were made at several other schools to compensate for gym overcrowding.

CHART II D

ADDITIONAL PHYSICAL EDUCATION SPACE NEEDED

UNDER ACTUAL CAPACITY

SCHOOL	No. Rms.	TOTAL PE SPACE	SCHOOL CAPACITY IF DETER'D ONLY BY PE SPACE	ACTUAL CAPACITY (SCHOOL)	S.F. PER STUDENT PARTICIPATING AT ACT. CAP.	MIN. ADD'L PE SPACE NECESSARY
BOSTON LATIN	3	8,100sf	810 stu.	1800	45 sf	9,900sf
BOSTON TECH	2	12,000sf	1200 stu.	1700	70.6sf	5,000sf
BRIGHTON	2	7,300sf	730 stu.	1000	73 sf	2,700sf
	boys	5,200sf	partitioned	500	120 sf	OK
	girls	2,100sf		500	42 sf	2,900sf
DORCHESTER	2	13,100sf	1310 stu.	900	145.5sf	OK
	boys	6,700sf		450	148.9sf	OK
	girls	6,400sf		450	142.2sf	OK
EAST BOSTON	1	5,400sf	540 stu.	1300	41.5sf	7,600sf
GIRLS HIGH	1	3,000sf	300 stu.	650	46.1sf	3,500sf
GIRLS LATIN	1	4,900sf	490 stu.	980	50 sf	4,900sf
HYDE PARK	2	7,200sf	720 stu.	1100	65.5sf	3,800sf
	boys	4,800sf	partitioned	550	87.8sf	700sf
	girls	2,400sf		550	43.6sf	3,100sf
JAMAICA PLAIN	1	3,000sf	300 stu.	500	60 sf	2,000sf
J.E. BURKE	1	6,400sf	640 stu.	950	67 sf	3,100sf
ROSLINDALE	1	4,300sf	430 stu.	800	54.8sf	3,700sf
SOUTH BOSTON	2	8,400sf	840 stu.	950	88.4sf	1,100sf
	boys	5,700sf		475	118.8sf	OK
	girls	2,700sf		475	56.3sf	2,050 sf

With regard to the school cafeterias, the picture is somewhat better. At Actual Capacity, all the schools in our survey would be able to accommodate their student bodies in three lunch shifts, and it would still be possible to expand the kitchens in those schools where it is necessary. In the case of five schools, all students could be fed in two shifts, and space would still be left both for kitchen expansion and the creation of a partitioned area for faculty dining. The remaining seven schools, however, would still lack a separate faculty dining area. At the present time, only Girls High has a potentially adequate faculty dining area. (See Chart II E for statistics concerning school cafeterias.)

CHART II E

CAFETERIA SPACE UNDER ACTUAL CAPACITY

SCHOOL	ESTIMATED CAPACITY OF CAFETERIA			SHIFTS POSSIBLE WITH ACT. CAPACITY	ACTUAL CAPACITY
	Head Master	Sargent	Fire Inspector		
BOSTON LATIN	700	900	950	3	1800
BOSTON TECH	600	630		3	1700
BRIGHTON	475	540	500	3	1000
DORCHESTER	500-600	600		2 *	900
EAST BOSTON	604	440		3	1300
GIRLS HIGH	235-240	450		3	650
GIRLS LATIN	600	732	600	2 *	980
HYDE PARK	525	540		3	1100
JAMAICA PLAIN	350	300	350	2 *	500
J.E. BURKE	---	590		3	950
ROSLINDALE	450	432		2 *	800
SOUTH BOSTON	636	624		2 *	950

* Under Actual Capacity enough space for a Faculty Dining area might be released.

3. SPACES NOT BEARING ON CAPACITY COMPUTATION

It should be noted that our subtraction of classroom equivalents to accommodate the needs of special facilities has been on the conservative side. We recognize that most of the high schools are severely limited by the amount of existing space available and are unable to expand on the site they now occupy. Thus, it was necessary to give priority to those spaces which we felt were most severely in need of expansion; and to student learning spaces over staff spaces.

For example, although more than 800 s.f. of Music space, more than 3,000 s.f. of Library space, and more than the present amount of office space are desirable in each school, it would be almost impossible to provide these expansions without reducing the amount of available general classroom space to an impracticable degree. Because of limitations on existing space, adjustments were not made for the inclusion or expansion of certain facilities which, ideally, require such attention.

In the area of STUDENT ACTIVITIES, very few, if any, schools provide adequate space for bands or orchestras, drama clubs, newspapers, and literary or art magazines to allow students to participate in these activities during the school day. Space should be available for these activities. However, no reduction in capacity was made to allow for them.

No adjustment was made for inclusion of LANGUAGE LABS as special spaces in addition to the regular foreign language classrooms. Only two schools are equipped with them, and in one case the lab is inoperative. In the other schools, individual audio equipment is provided students in standard classrooms. In view of the current disagreement among the experts--and among teachers--concerning the desirability of language labs, we decided not to make any provision for them. In any case, a decision to include them would have only a marginal effect on a school's capacity.

It was assumed that existing SHOP and HOME ECONOMICS spaces were adequate for these programs at each school. However, if such courses were to be offered to a broader segment of the student population, expanded facilities would most likely be required.

Spaces for SPECIAL STUDENTS were not considered in our computation. In those schools that have programs for special students, space was assumed to be adequate. No additional space was assigned in this category to schools which have no existing program for special students.

BUSINESS EDUCATION space was quite adequate and well maintained in all schools which offer Business courses. However, there are no typing rooms at the Latin Schools, and their Head Masters stressed the need of their students to learn how to type. Therefore, one classroom equivalent was deducted for this purpose in each of the Latin Schools.

CONCLUSIONS

The charts shown on the following pages embody the conclusions of our study. They can be best understood if examined with the following explanations and interpretations in mind.

Chart II F deals only with the twelve high schools which were visited in connection with the study. It shows the difference between the Sargent Report's calculation of capacity for each high school and our own. The reader will note that in every case, the "Actual" Capacity--which we believe is a realistic figure--is lower than the Sargent figures, because it includes adjustments for insufficient specialized spaces not calculated by Sargent; and it includes recomputations of existing space based on up-dated standards of educational quality.

Chart II G combines the enrollment and capacity statistics of the twelve high schools with those of the other high schools, so that we can have a complete high school picture. Here we have used the term "working capacity" simply to indicate that we have added together several different kinds of capacities: the Actual Capacities (for the twelve surveyed schools); the Sargent capacities; and, in the case of the English High School Annex, the

current enrollment (in the absence of a Sargent capacity figure).

Chart II G shows that, if one accepts the Sargent capacity figures, then the total capacity of the high school system is almost equal to the total enrollment (but as we know, many schools are overcrowded and many are under-utilized). However, our capacity figures indicate that, at present, another 4,381 seats are needed in order to accommodate the current enrollment. In other words, taken as a whole, Boston's high schools are overcrowded. Boiled down to their essential meaning, the figures tell us what we have seen in a number of schools: that many students and teachers work and study in cramped quarters, that such facilities as libraries, art studios, music practice rooms, student and staff workshops or conference rooms, etc., are sacrificed altogether or are strictly limited in size because of the desperate need for space, and that, as a result, flexibility or innovation in curriculum or in the methods of operating high schools are discouraged.

The capacity figures developed in Charts II F and G are utilized in Chart II H, which consists of four pages, and which attempts to show how many new high school seats will be required to meet the needs of the coming decade.

The enrollment projection figures are those developed by the BRA's Planning Department in the first portion of this study.

With regard to the assumptions we have made concerning planned or probable additions to high school capacity, we have been most optimistic about when new schools might be ready for occupancy--a fact which we stress on the charts themselves. Moreover, the reader should be cautioned that there is no assurance that the planned or probable additions which we have listed will actually be realized (with the exception of the Bryant Stratton Building, which has already been purchased by the city). At the moment, only the new English High and Phase I of the Secondary Education Complex are in the design process. Obviously, if the other prospective additions which we have listed are to be available by the dates we have indicated, design work will have to begin very shortly.

The reader will note that Chart II H shows an enrollment jump from 20,659 in 1969-70 to 24,416 in 1973-74, and we should point out that virtually all of this increase derives from the addition of all those 9th graders now in the junior high schools to the high school enrollment. This is in keeping with the present plan to convert to a 4-3-5 system. However, the result of our 1973-74 calculations is to show that we shall have about 4,400 more

students than seats--even assuming earliest possible completion of all presently planned new construction. In other words, it is clear that we shall not be able to accommodate all 9th graders in the high schools by 1973-74. And, this fact, we should point out, has implications for the presently overcrowded junior high schools, which must, in any case, transfer out their 9th graders before they can convert to middle schools and take on the 6th graders now in the elementary schools.

Chart II H also shows that in 1974-75 capacity will still not have caught up with enrollment, even though we have assumed that all currently planned construction will take place, and that it will be completed at the earliest possible date. It also assumes that the full-time student body of the Occupational Resource Center will number 3,000--and this is presumably an optimum figure. No official determination of the size of the student body at this school has yet been made.

Finally, the last page of Chart II H shows that in the period 1975-80 enrollment will have outstripped capacity by a very wide margin. In part, this is predicated on the loss of three schools--Girls High, Jamaica Plain, and Girls Latin--which, although no official action has been taken, have been mentioned from time to time as likely prospects for abandonment--at least as high school facilities--

in the near future. Girls High, located in Roxbury, is imbalanced, and has been losing students steadily over the past few years. Jamaica Plain is somewhat small for a high school (as indicated earlier, we have pegged its actual capacity at 500). Girls Latin is in a poor location for a school which is intended to draw students from all over the city. Moreover, these three schools, although well maintained, and in generally sound condition, are among the oldest high schools in the city.

In any case, we feel that, in the light of present planning, it would be unwise to consider abandoning these schools until at least the 1975-80 period, and even then they must be retained if no alternatives are provided.

Essentially, then, our overall conclusion, based on the foregoing considerations, is that the city must press ahead as quickly as possible with its current construction plans--or at least with whatever plans would provide an equivalent number of seats--and that in addition planning should begin now in order for the city to meet the needs of the 1975-80 period.

It must be strongly emphasized that if the construction of new schools is not accompanied by the rehabilitation and modernization of the existing schools, then serious educational imbalances will be created within the system.

And it is more than likely--given the probable continuation of the open enrollment policy--that a failure to improve and update the old schools might well lead to their abandonment by the students and a consequent overcrowding of the new, more attractive facilities.

CHART II F

REVISION OF SARGENT CAPACITIES

SCHOOL	CURRENT ENROLLMENT (10/1/69)	SARGENT CAPACITY	RECOMPUTED CAPACITY	ACTUAL CAPACITY
BOSTON LATIN	2074	2230	2095	1800
BOSTON TECH	1878	2010	1848	1700
BRIGHTON	1328	1400	1211	1000
DORCHESTER	1626	1020	988	900
EAST BOSTON	1214	1590	1443	1300
GIRLS HIGH	454	900	762	650
GIRLS LATIN	1208	1250	1182	980
HYDE PARK	1716	1430	1322	1100
JAMAICA PLAIN	728	840	793	500
J.E. BURKE	1055	1200	1080	950
ROSLINDALE	1370	1160	1011	800
SOUTH BOSTON	1853	1250	1158	950
TOTAL	16,504	16,280	14,893	12,630

CHART II G

TOTAL NUMBER OF SEATS REQUIRED TO ELIMINATE PRESENT OVERCROWDING

SCHOOL	CURRENT ENROLLMENT (10/1/69)	SARGENT CAPACITY	WORKING CAPACITY
TOTAL 12 SCHOOLS STUDIED	16,504	16,280	12,630 ACTUAL CAP.
			SARGENT CAP. OR CURR. ENROL.:
BOSTON TRADE	720	1140	1140
CHARLESTOWN	860	580	580
DORCHESTER ANNEX	231	190	190
ENGLISH HIGH & ANNEX	1229 288	1300 --	1300 288
GIRLS TRADE	417	250	250
WORK STUDY	410	--	--
SUB TOTAL	4,155	3,460	3,748
TOTAL SYSTEM	20,659	19,740	16,378
(including temporary space at Dorchester High)		255 19,995	

DIFFERENCE BETWEEN SARGENT CAPACITY AND CURRENT ENROLLMENT:

20,659 19,740 919 SEATS

PRESENT OVERCROWDING. DIFFERENCE BETWEEN TOTAL WORKING CAPACITY AND CURRENT ENROLLMENT:

20,659 16,378 4,381 SEATS

CHART II H

ASSUMPTIONS REGARDING LOSSES AND ADDITIONS

TO HIGH SCHOOL CAPACITY DECADE 1970-1980

PLANNED OR PROBABLE LOSS OF HIGH SCHOOL CAPACITY:

SCHOOL	WORKING CAPACITY
ENGLISH HIGH	1300
ENGLISH HIGH ANNEX (T. ROOSEVELT)	288
CHARLESTOWN HIGH	580
BOSTON TRADE	1140
GIRLS TRADE	250
GIRLS HIGH	650
JAMAICA PLAIN HIGH	500
DORCHESTER HIGH ANNEX (PIERCE)	190
GIRLS LATIN	980
TOTAL LOSSES	5,878 SEATS

PLANNED OR PROBABLE ADDITION TO HIGH SCHOOL CAPACITY:

SCHOOL	CAPACITY	OPTIMISTIC OPENING DATE
SECONDARY EDUCATION COMPLEX (PHASE I)	2500	Sept. 1973
" " " (PHASE II)	2500	Sept. 1974
NEW ENGLISH HIGH	2000	Sept. 1973
NEW CHARLESTOWN HIGH	1000	Sept. 1973
OCCUPATIONAL RESOURCE CENTER	3000	Sept. 1974
BRYANT STRATTON BUILDING (SUBSYSTEM)	300	Sept. 1970
TOTAL ADDITIONS	11,300 SEATS	

SUBTRACTING LOSSES FROM ADDITIONS: 5,878

NET ADDITION TO CAPACITY: 5,422 SEATS

CHART II H (CONT.)

1973-74 PICTURE (OPTIMISTIC)

TOTAL SYSTEM WORKING CAPACITY We shall use this figure as our starting point. It represents the 1969-70 capacity of all high schools. (See Chart II G.)	16,378 SEATS	
To this we add:		
BRYANT STRATTON BUILDING	300	
CAPACITY UNTIL SEPT., 1973:	16,678 SEATS	
1973-74 ENROLLMENT:		24,416 STUDENTS
1973-74 ADDITIONS TO CAPACITY:		
SECONDARY EDUCATION COMPLEX (PHASE I)	2500	
NEW ENGLISH HIGH	2000	
NEW CHARLESTOWN HIGH	1000	
TOTAL ADDITIONS:	5500 SEATS	
1973-74 LOSSES TO CAPACITY:		
ENGLISH HIGH	1300	
ENGLISH HIGH ANNEX (T. ROOSEVELT)	288	
CHARLESTOWN HIGH	580	
TOTAL LOSSES:	2168 SEATS	
NET ADDITION TO CAPACITY 1973-74:	3,332 SEATS	
PLUS PRIOR CAPACITY:	16,678	
EQUALS TOTAL HIGH SCHOOL CAPACITY 1973-74:	20,010 SEATS	
EXCESS OF ENROLLMENT OVER CAPACITY:		4,406 STUDENTS

CHART II H (CONT.)

1974-75 PICTURE (OPTIMISTIC)

1974-75 ENROLLMENT:		25,992 STUDENTS
1973-74 CAPACITY:	20,010 SEATS	
1974-75 ADDITIONS TO CAPACITY:		
SECONDARY EDUCATION COMPLEX (PHASE II)	2500	
OCCUPATIONAL RESOURCE CENTER	3000	
TOTAL ADDITIONS:	5500 SEATS	
1974-75 LOSSES TO CAPACITY:		
BOSTON TRADE	1140	
GIRLS TRADE	250	
TOTAL LOSSES:	1390 SEATS	
NET ADDITION TO CAPACITY 1974-75:	4,110 SEATS	
PLUS PRIOR CAPACITY:	20,010	
EQUALS TOTAL HIGH SCHOOL CAPACITY 1974-75:	24,120 SEATS	
VERSUS ENROLLMENT 1974-75:		25,992 STUDENTS
EXCESS OF ENROLLMENT OVER CAPACITY:		1,872 STUDENTS

CHART II H (CONT.)

1980-81 PICTURE (OPTIMISTIC)

1980-81 ENROLLMENT:		28,740 STUDENTS
1974-75 CAPACITY:	24,120 SEATS	
1975-80 ADDITIONS TO CAPACITY:	NONE	
1975-80 LOSSES TO CAPACITY:		
GIRLS HIGH	650	
JAMAICA PLAIN HIGH	500	
GIRLS LATIN	980	
DORCHESTER HIGH ANNEX (PIERCE)	190	
TOTAL LOSSES:	2,320 SEATS	
1974-75 CAPACITY:	24,120 SEATS	
MINUS 1975-80 LOSSES TO CAPACITY:	2,320	
EQUALS TOTAL HIGH SCHOOL CAPACITY 1980-81:	21,800 SEATS	
VERSUS ENROLLMENT 1980-81:		28,740 STUDENTS
EXCESS OF ENROLLMENT OVER CAPACITY:		6,940 STUDENTS*

*NOTE: The previous calculations have ignored the presence of 7th and 8th graders in the two Latin Schools. If, however, we were to assume that they would still be there in 1980-81, and in about the same numbers as at present, then we must add another 1,224 to the 1980-81 enrollment figures.

EXCESS OF ENROLLMENT OVER CAPACITY COUNTING 7th AND 8th GRADERS:	6,940 1,224	
		8,164 STUDENTS

III. PHYSICAL CONDITIONS OF THE HIGH SCHOOLS

PHYSICAL CONDITIONS OF THE HIGH SCHOOLS

It is our impression that the over-all physical condition of Boston's high schools leaves much to be desired. In every school we visited, some important deficiencies were apparent. For discussion purposes, these deficiencies can be divided among three categories:

(a.) poor maintenance

(b.) inattention to situations which call for repairs -- in many cases urgently

(c.) need for renovation and modernization

In dealing with the first of these issues--poor maintenance--it should be acknowledged that a number of schools appeared to be very well maintained. In fact, the contrast between these schools and those which are poorly maintained is striking, and the reasons for the difference should be looked into. In any case, we have observed that the age of a building is not the crucial factor contributing to this contrast.

Those schools which we feel are most poorly maintained are Boston Technical, East Boston, and South Boston. In particular, Boston Technical is in a disgracefully dirty condition--so much so, that the students have protested in writing.[1]

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[1] "Existence" at Boston Technical High School: a report submitted by the Student Council on January 19, 1970, to the Mayor, the Chairman of the School Committee, and the Chief Structural Engineer of the School Department, among others.

Proper maintenance becomes more difficult when essential repairs or restorations are not performed as they become necessary, and so it is not surprising that the three schools mentioned above are deficient in this regard. It is our conviction that unless Boston Technical, South Boston High, and East Boston High are maintained more effectively--in terms of daily upkeep, the performance of needed repairs, and the performance of periodic restoration work--then within ten years they will have to be written off, and we shall have to provide even more new high school seats than we had hitherto contemplated.

Certain needs for repairs were found to be common to a number of schools:

1. Repointing of exterior brick walls in order to prevent leakage,

2. Replacement or restoration of window sashes; replacement of cracked or broken windows,

3. Replacement or restoration of cracked, loose, or torn up floorboards,

4. Replacement of antique toilet facilities and restoration of lavatory rooms,

5. Replacement or restoration of classroom and corridor wall surfaces, including chalkboard,

6. Replacement of cracked or tattered blackout shades.

The areas generally found to be in need of renovation and modernization are science labs, art studios, gymnasiums (and especially the locker rooms and showers attached to the gymnasiums), and cafeterias. While the inadequacies observed in each of these areas will be treated in detail in Appendix A, several comments should be made at this point with regard to two particularly inadequate types of facilities.

First, many science labs are antique, cramped, and ill-equipped. In some cases we found that gas, water, and electric services did not work, and had not worked for months. It is apparent that a considerable amount of modernization must be provided in the science facilities of virtually every high school.

Second, all of the high schools lack adequate physical education lockers and showers. Spaces provided for changing clothes are generally almost bare--equipped only with a few benches and hooks on the walls--ill-ventilated, and dismal. The number of showers provided is generally far fewer than the number needed to serve all the students in an average gym section, and what showers there are are usually not in working order. The truth of the matter is that in only one or two high schools do students take showers after gym classes. In part this situation is attributable to the limited time available for the typical

Physical Education class, but even if time were available, few students could avail themselves of a shower.

The need for modernization of furnishings and equipment is particularly apparent with regard to the following:

1. Lighting. Many of the high schools retain their original globe-type incandescent lights, while several others have installed fluorescent lights throughout. All the schools should adopt the latter type, which provides much more effective illumination.

2. The equipment and fixtures in a number of cafeteria kitchens appear to be antiquated and should be replaced.

3. The vast majority of high school classrooms in Boston appear to have retained the same desks and chairs with which they were originally outfitted, bolted to the wooden floors and pierced for inkwells. Many of them are in poor condition. We recommend that as many as possible be replaced with new, movable desks and chairs.

NOTE: Again, we should emphasize that in this section we have touched upon only some of the problems confronted by the high schools in the way of physical deficiencies. Further information may be found in Appendix A, which deals with problem areas common to the high schools in general, and in Appendix B, which deals with each high school in particular.

REPORT OF THE SCHOOL DEPARTMENT'S CHIEF STRUCTURAL ENGINEER

In connection with the issue of rehabilitation, it is important to note that on June 5, 1969, the Chief Structural Engineer of the Boston School Department, Mr. Galeota, submitted to the Boston School Committee a series of recommendations entitled, "Major Alterations and Repairs Program for Boston Public Schools." These recommendations constitute the result of a survey undertaken by personnel of Mr. Galeota's office, and include the twelve high schools we have been dealing with.

The recommendations made with respect to the twelve high schools call for the expenditure of $11,254,000 for repairs and modernization, and coincide closely with our own findings with respect to physical conditions. The Galeota report allocates the bulk of the expenditure to alterations and repairs, and to modernization of heating systems, plumbing, and electrical systems. However, it also recognizes the need for new Libraries, Science rooms, Art rooms, and Guidance offices--as well as other facilities--in a number of schools.

Mr. Galeota's recommendations, which would require an overall expenditure of almost 39 million dollars for repair and renovation of high schools, junior highs, and

elementary schools, and which would spread the work over a 10-year period, have not yet been approved, due to knotty legal/financial problems.

IV. RELEVANT DATA ON BOSTON'S HIGH SCHOOLS

RELEVANT DATA ON BOSTON'S HIGH SCHOOLS

The issue of how many students can or should be housed in the existing high schools is, of course, only one among a number of factors involved in formulating a plan to meet the need for additional high school seats over the next decade.

In order to put the problem in a broader perspective, and because we felt it would be helpful to collect in one document information that is not readily available elsewhere, we have presented in the following pages some relevant data on Boston's high schools:

1. Age of the high schools
2. Changes in enrollment over the past decade
3. Distribution of high school students by residence
4. High school attendance patterns by neighborhoods.

(Appendix E. contains data on high school attendance patterns by school.)

Among the conclusions that may be drawn from this data are the following:

1. The average age of Boston's high school buildings is 52 years. The newest high school, the Jeremiah E. Burke, was built in 1934. Moreover, six of the high schools were originally built to house educational programs which were dissimilar--to a lesser or greater degree--to those which

they now accommodate. And another was originally built as a private residence.

These facts reveal a good deal about the magnitude of the problem of maintenance and repair, and they explain the need for modernization.

2. In general, over the last decade, the city-wide schools have been losing students to the district schools, while the high school population has remained more or less stable. The result is that some of the outlying district schools have become grossly overcrowded (perhaps the worst examples are Dorchester and South Boston Highs), while some of the intown schools have become under-utilized (in particular, Girls High and Boys Trade).

The Latin schools and Technical High are in a class by themselves, being rather prestigous schools requiring an examination for entry. The drop in enrollment at the Latin schools is due not to a falling off of demand for admission to these schools, but rather to space limitations.

3. Two of the high schools, the Jeremiah E. Burke and Girls High, as well as the high school component of the subsystem, are racially imbalanced (that is, 50% or more of their students are nonwhite). Jamaica Plain High School and Boys Trade appear to be approaching the same condition. In general, there seems to be a strong correlation between racial imbalance and a drop in enrollment.

4. The vast majority of students travel to school by MBTA, many of them a long distance. Schools with particularly good academic reputations--like the two Latin schools--appear capable of attracting students from all over the city, despite the time and inconvenience required for travel.

5. There is a strong correlation between residential area and attendance at the Latin schools. High income neighborhoods send far more students to these schools than do low income neighborhoods. For instance, 40% of West Roxbury's high school students attend the Latin schools, as contrasted with 5% of Roxbury's, or 9% of South Boston's.

6. The city-wide schools for boys currently enroll about twice as many students as the city-wide schools for girls. Consequently, four of the district high schools have student bodies which are approximately 60-70% female (Hyde Park, Jamaica Plain, Roslindale, Dorchester). The remaining district highs have boy-girl ratios that are about even.

Incidentally, the student bodies of the high schools as a whole are about 53% male and 47% female. Statistically, girls usually have a slight edge in numbers in a given population. Hence, we may conclude that Boston parents send more girls than boys to parochial high schools.

CHART IV A

DATE OF CONSTRUCTION OF BOSTON'S HIGH SCHOOLS

SCHOOL	DATE OF COMPLETION	ADDITIONS
BOSTON LATIN	1922	1933 (42 rooms)
BOSTON TECH	1926-29*	1960 $2,000,000 of alterations
BOSTON TRADE	1917	1926 (additional shops) 1939 (7 shops) 1958 (gym and cafeteria)
BRIGHTON	1930	
CHARLESTOWN	1907	
DORCHESTER	1925*	1960 (gym added) 1969 (12 temporary classrooms)
EAST BOSTON	1926	1940 (2 shops, etc.)
ENGLISH HIGH	1915*	
GIRLS HIGH	1913*	1939 (7 rooms, practical arts)
GIRLS LATIN	1901*	1910 (18 rooms)
HYDE PARK	1929	
JAMAICA PLAIN	1898	1926 (addition)
J.E. BURKE	1934	
ROSLINDALE	1925*	1926 (second unit, 14 rooms) 1927 (third unit, 14 rooms)
SOUTH BOSTON	1901	1926 (7 rms, 4 shops) 1937 (10 rms, 6 shops) 1940 (auto body shop)
TRADE SCHOOL FOR GIRLS	1923**	

*Originally built for programs other than those now accommodated.

**Originally built as a private residence.

CHART IV B

CHANGES IN ENROLLMENT IN BOSTON'S HIGH SCHOOLS

OVER THE PAST DECADE

SCHOOL	STUDENT BODY	1960 ENROLLMENT	PRESENT ENROLLMENT (10/1/69)	PERCENT CHANGE 1960-1969
DISTRICT SCHOOLS				
BRIGHTON	(Coed)	1166	1328	+14%
CHARLESTOWN	"	718	860	+20%
DORCHESTER	"	1051	1626	+55%
EAST BOSTON	"	970	1214	+25%
HYDE PARK	"	1236	1716	+39%
JAMAICA PLAIN	"	822	728	-11%
J.E. BURKE	(Girls)	1632	1055*	-35%
ROSLINDALE	(Coed)	1149	1370	+20%
SOUTH BOSTON	"	1312	1853	+41%
CITY-WIDE SCHOOLS				
BOSTON LATIN	(Boys)	2589	2074	-20%
BOSTON TECH	"	1501	1878	+25%
BOSTON TRADE	"	1199	720	-40%
ENGLISH HIGH	"	1937	1517	-22%
GIRLS HIGH	(Girls)	774	454*	-41%
GIRLS LATIN	"	1531	1208	-21%
GIRLS TRADE	"	282	417	+44%

CHART IV B (CONT.)

SCHOOL	STUDENT BODY	1960 ENROLLMENT	PRESENT ENROLLMENT (10/1/69)	PERCENT CHANGE 1960-1960
SUBSYSTEM (PIERCE)	(Coed)	--	231*	--
WORK-STUDY	"	--	410	--
TOTAL		19,869	20,659	+4%

*Racially Imbalanced Schools (50% or more Non-white).

Percentage of Non-white students in the high schools is about 23%.

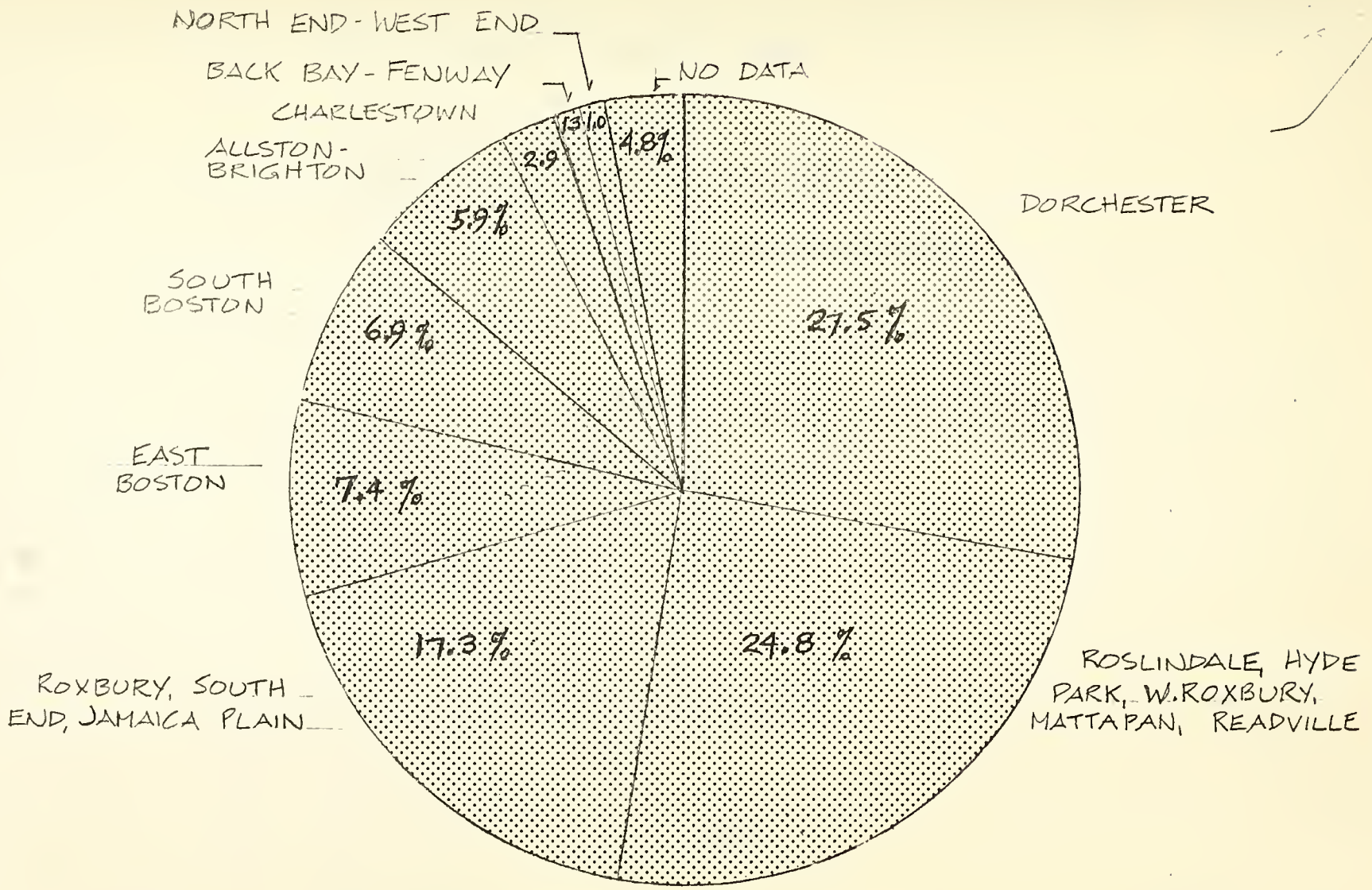

CHART IV C

GEOGRAPHIC DISTRIBUTION OF BOSTON HIGH SCHOOL STUDENTS (BY RESIDENCE)

April 1970

HIGH SCHOOL ATTENDANCE PATTERNS BY NEIGHBORHOOD

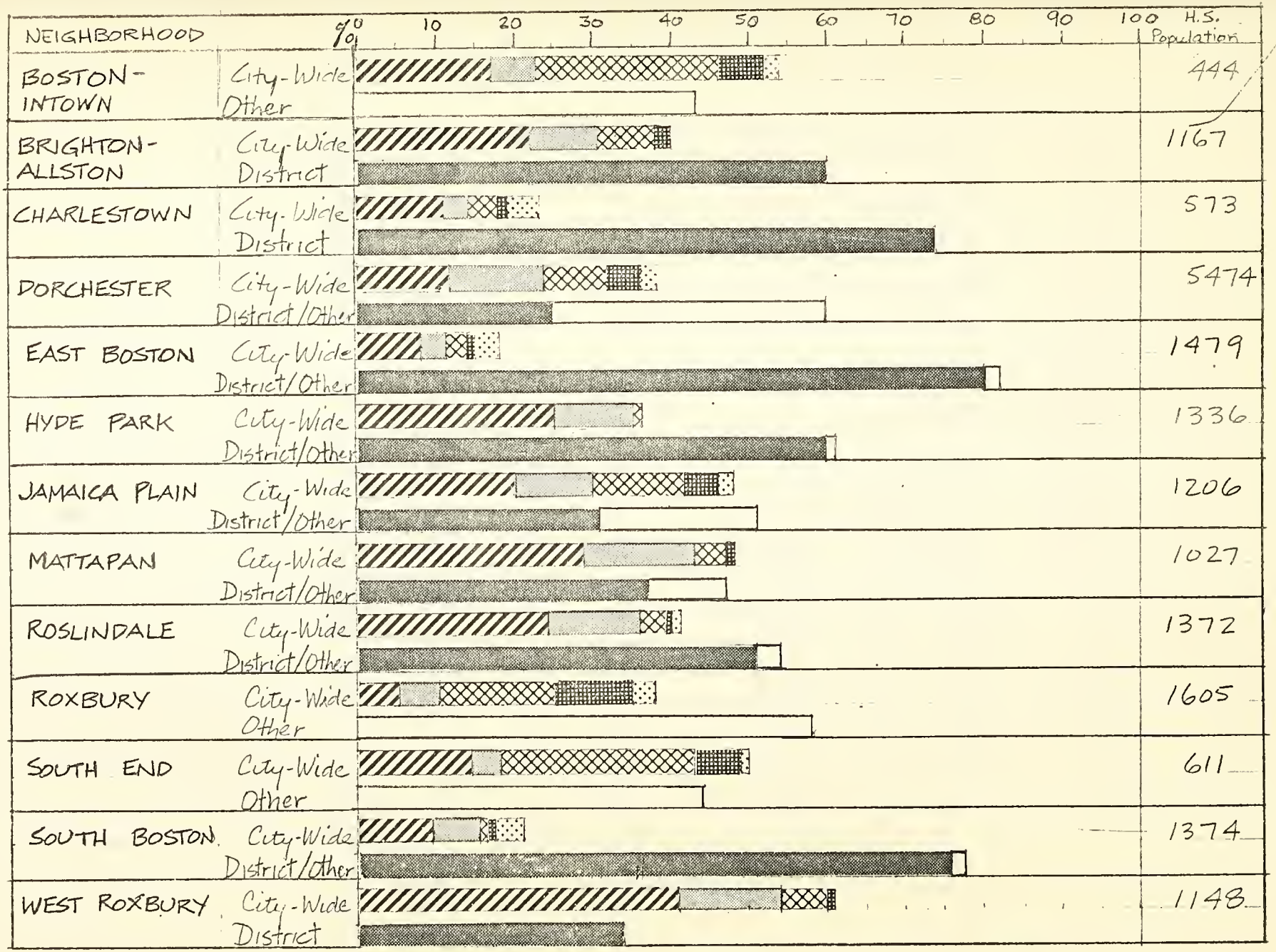

CHART IV D

FOOT NOTES--CHART IV D

HIGH SCHOOL ATTENDANCE PATTERNS BY NEIGHBORHOOD

--ADDITIONAL REMARKS

1. Figures supplied by Boston Public Schools, Data Processing Center, computer print out titled "Geographic Distribution of Students 04/13/70".

2. Where attendance is less than 1% at one of the city-wide schools, it is not shown.

3. City-wide figure does not include J.E. Burke or Girls High, since these schools no longer draw more than a few students from outside Roxbury, the South End, and North Dorchester.

4. Boston Intown--Area includes Downtown, Fenway, Back Bay, North End, and West End.

   "Other" includes 18% to Brighton High, 15% to Charlestown High (from North End); also J.E. Burke, East Boston, Girls High.

5. Dorchester--"Other" includes 12% to South Boston High, mostly from Uphams Corner.

6. Roxbury--No district high; "Other" includes Brighton 10%, Girls High 11%, J.E. Burke 14%, Jamaica Plain 13%, Dorchester 4%, Pierce 6%.

7. South End--No district high school; "Other" includes J.E. Burke 23%, Girls High 11%, Brighton 8%, Jamaica Plain 2%.

8. Girls Trade High was not included, because enrollment figures were not available.

APPENDICES

APPENDIX A

MAJOR AREAS OF SPACE INADEQUACY: ANALYSIS AND DESCRIPTION

1. Libraries.

In all of the high schools without exception, the libraries are inadequate in terms of space needs and available materials. Most of them are little more than 1½ standard classrooms in size (800-1200 s.f.) with a few tables and from 5,000-6,000 volumes. The average seating capacity of these rooms is 40. Only the Latin Schools have larger book collections. (Boston Latin has approximately 10,000 volumes; Girls Latin approximately 12,000 volumes.) Hyde Park and Brighton are the only schools with about 2,000 s.f. of library space each. None of the libraries is equipped for audio-visual listening and viewing. Most are deficient in periodicals collections.

In view of the growing importance of individual work in the contemporary school, it should be recognized that the library, in an expanded role as a media center, has an important part to play. This part necessitates that more space be allocated for libraries in all schools.

The American Library Association recommends an allocation of 40 s.f. per student for reading and browsing, with enough total space for 15% of the student body to be able to use the library at any one time. We realize that

this may be more ideal than can be achieved and we would recommend a more conservative requirement of 30 s.f. per student at 10% of the total enrollment's utilization at any one time. This standard would require 3,000 s.f. minimum for a 1,000 student school. Recognizing the limitations of space available in the existing schools, we have recommended that library space be increased to 2,400 s.f. minimum and at least 3,000 s.f. where it appears possible or where the Actual Capacity exceeds 1,000 students.

We also recommend that the number of volumes be increased in each school library, and that provision be made for students to use the library during free time in school and after school hours. The ALA sets a standard of 6,000-10,000 titles or 20 volumes per student, whichever is larger, for schools of 250 students or more; plus periodicals, newspapers, films, tapes, etc. (Standards for School Media Programs, American Library Association and National Education Association, 1969, p. 30.) All school libraries require more seating and a variety of accommodations: individual carrels (wet and dry), tables and chairs, comfortable lounge-type seating. In addition, lighting in many libraries must be improved.

The following chart shows the total amount of library space presently available in the twelve high schools surveyed and indicates the amount of space needed to accommodate Actual Capacity.

LIBRARY SPACE

SCHOOL	SURVEY ESTIMATE (s.f.)	SARGENT (s.f.)	ACTUAL CAP. (SCHOOL)	IDEAL FLOOR AREA (serving 10% enrol. @ 30 s.f./student)
BOSTON LATIN	1000	1500	1800	5400
BOSTON TECH	part of pub. lib.		1700	5100
BRIGHTON	2000	2028 + 336	1000	3000
DORCHESTER	900	810	900	2700
EAST BOSTON	1200	1000	1300	3900
GIRLS HIGH	1200	1200	650	2000
GIRLS LATIN	1250	1167	980	3000
HYDE PARK	2000	2700	1100	3300
JAMAICA PLAIN	800	875	500	1500
J.E. BURKE	1200	1254	950	2850
ROSLINDALE	600	952	800	2400
SOUTH BOSTON	800	868	950	2850

2. Science Facilities.

The inadequacies of science facilities in the high schools fall under three major categories: 1. lack of work space; 2. lack of storage; 3. lack of adequate equipment.

All of the schools are greatly lacking in adequate space. Even those which have enough science rooms do not have large enough rooms. Most science rooms are 800-900 s.f. with very little storage space. Many labs are actually demonstration rooms with only one work table. Those which do have work stations usually have antiquated or insufficient equipment. Many labs are not properly equipped with electrical and gas outlets and running water. Where there are outlets, many are not in working condition. Almost all science rooms lack hoods over work areas for proper ventilation.

The average city-wide class size for science is 24 students per class, which is reasonable. However, there is a range between classes of very low enrollment and those which are overcrowded. It may well be that there are not more students taking science in the underenrolled schools because of the lack of adequate facilities to accommodate them. At any rate, the present spaces in these schools are not adequate to accommodate any students in an effective science program, let alone an average of 24 per class.

We recommend a more effective use of science space by conducting science labs as double periods. With the time required to set up equipment and the length of any normal experiment, this scheduling would enable more students to participate directly in meaningful scientific experimentation, and would probably contribute to more effective utilization of science labs.

We have used a science class capacity of 24 for chemistry and physics labs. A class size of 28 was used for biology labs (as opposed to the Sargent figure of 30 per classroom). However, these class sizes may be doubled for a science lecture class (50 students).

In order to accommodate lab students a minimum of 1,200 s.f. per lab, plus about 300 s.f. additional space for storage is required. However, many schools that have existing science spaces of 800 s.f. may be unable to expand their facilities to provide this much more space. Thus, we have conservatively estimated space inadequacies and have allowed that some science rooms might be continued as regular classroom size if proper adjacent storage space were found and if there were a variety of spaces provided--including some large (1,200 s.f.) labs, and at least one lecture room.

We have assumed that the most effective science learning can occur by participation in laboratories and we have therefore stressed requirement for labs and not made special provision for demonstration rooms.

In calculating the need for science space, we have assumed an enrollment of 70% of the student body. (Current enrollment in science courses is about 64%, but better facilities would likely increase the number of students participating.) Space allocation was based on an ideal of 1,200 s.f. per lab, accommodating 24 students (@ 50 s.f. per student).

The formula used for computing the number of science spaces required is as follows:

$$\frac{\text{percent of total enrollment taking science} \times \text{periods spent by each student per week in science}}{\text{average class size} \times \text{total periods available for science each week} \times \text{utilization factor}}$$

or,
$$\frac{.70 \text{ (total enrollment)} \times 5}{24 \times 35 \times .70}$$

Applying this formula to a 1000 student school model, we arrived at the space need of one room per 170 students. We applied this formula to determine the additional space needs in each school.

3. Physical Education.

No high school in the Boston system has adequate gym space indoors and none except for Boston Latin and Dorchester High has any usable outdoor space.

Most existing gyms are not large enough to handle the Actual Capacities of the schools, let alone the current enrollments. All schools (with the exception of Dorchester) have inadequate dressing and shower facilities. Most have nothing more than a small room with some hooks and a bench. All schools require enlargement of dressing facilities, inclusion of lockers, and renovation or addition of operable showers. Showers, where they are available, are usually inoperable. Dressing rooms are small and lack ventilation. Girls and boys rarely have separate gyms, but share one gym, which has sometimes been divided into two insufficient spaces. (The girls' space is usually only 2,000 s.f.) Many gyms are merely large open spaces lacking special physical education equipment or regulation size courts.

Physical education course offerings reflect the condition of the facilities. Many courses lack variety and all grades are mixed together. Course enrollments are generally so high as to prohibit functional participation in anything resembling athletic activity. At no school is the ideal of 30 students per teaching station regularly achieved. The

city-wide average is more nearly 50 per teaching station, with much double and triple use of the gym facility. In Dorchester (a school which is especially overcrowded at the present time) the average class sizes for both boys and girls reach over 60 and in Brighton there are as many as six sections (or 162 people) meeting in the gym during at least two periods of the week.[1]

Not only are average class sizes overloaded, but nowhere is the State-required 3 periods (120 minutes) per week of participation in physical education met consistently.[2] Most physical education classes meet twice a week except for the following which meet only once a week: boys' classes at Roslindale; 11th graders at Tech; 11th and 12th graders at J.E. Burke.

Often the only way schools can keep gym class sizes within reason is to limit the number of periods per week any one student is involved.

Particularly for gym classes the length of the period is an important factor in determining full or token participation. The 40-minute periods now offered do not provide adequate time for changing, showering, and class activity.

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[1]Calculated from statistics provided by the Data Processing Center, Boston Public Schools: "High Schools: Analysis of Course Enrollment 02/18/70", and "Master Schedule of Course Assignments 03/05/70".

[2]General Laws Relating to Education 1968, Chapter 71, Section 3, Commonwealth of Massachusetts, Department of Education. According to Mr. Smith of the Massachusetts

The periods limit actual activity to 20 minutes, which in reality means the time it takes to warm up or get a game started. For this reason, we consider physical education to be another area in which the scheduling of double periods would increase both the efficiency of facilities and the enjoyment and value of the experience.

When including gym space in determining Actual Capacities of schools, we were faced with a dilemma. We could either subtract regular classroom equivalents up to the number needed to increase physical education space; or we could recommend that a new facility be built, either annexed to the present one or on a new site; or we could cut the capacity of the entire building low enough to enable the present facility to be sufficient. Since the amount of available physical education space is generally far less than what is necessary, the subtraction of classroom equivalents was not practicable. Consequently, we decided not to consider inadequate gym space as a basis for reducing capacity, but to recommend additional space necessary at Actual Capacity.

We consider that each school should have at least one full-sized basketball gym with enough additional indoor space to allow 100 s.f. for each student participating in gym at any one time. A class standard of not more than 30 per teaching station of 3,000-6,000 s.f. was adopted. (A

School Buildings Assistance Commission, the law requires 5 days per week of physical education for all secondary schools (grades 7-12); however, the interpretation agreed on by the Assistant Commissioner of Education and the legislative committee is three days per week (120 minutes) of physical education activity and two days per week of Health Education.

space of over 6,000 s.f. was assigned two teaching stations.) The thirty-five period week can accommodate 10 three-period units of gym instruction (gym utilization near maximum, 86%). Thus, approximately 10% of the total student enrollment would be taking gym during any class period. On this basis, we could figure the present capacity of existing physical education space and the amount of additional space needed to accommodate the Actual Capacity. Our results (see Chart II·D) showed that approximately 48,000 s.f. is necessary to provide minimum standards for indoor physical education in the twelve schools surveyed. Almost every school would have to add the equivalent of one new gym to provide adequate space for the Actual Capacity.

The actual amounts of additional space necessary are as follows:

Boston Latin	9,900 s.f.
Boston Tech	5,000 s.f.
Brighton	2,700 s.f.
Dorchester	OK
East Boston	7,600 s.f.
Girls High	3,500 s.f.
Girls Latin	4,900 s.f.
Hyde Park	3,800 s.f.
Jamaica Plain	2,000 s.f.
J.E. Burke	3,100 s.f.
Roslindale	3,700 s.f.
South Boston	1,100 s.f.
TOTAL	47,300 s.f.

4. Art Space.

All high schools in Boston have some specialized space set aside for art. In nearly all schools, however, the present space is painfully inadequate, averaging 850 s.f. per room (1,500 s.f. per school). Some schools supplement their regular art space by holding art classes in the cafeteria or in general classrooms. The inconvenience of this situation, both for the comfort of the student and diversification of the instruction and storage of projects and materials is evident. At East Boston High, a school not otherwise overcrowded, present art space is so limited that, according to the art teacher, 50-60 students cannot take art each year who would like to. Space limitations restrict the art curriculum in most schools to painting (usually water-based paints only), drawing, and sometimes pottery. We found no school in our survey where both available space and the quality of equipment were adequate to provide an interesting and varied art program for high school students.

Art rooms are too small. (None in the city reaches the ideal of 1,200 s.f.) They are oftem poorly-equipped, inadequately lighted, and furnished with bolted-down desks. Some rooms lack wash basins. Few have any specialized equipment except for a small portable kiln for pottery and

ceramics. Storage of pupil projects and supplies is a great problem, and places severe limits on the creative experimentation any student is allowed.

Supplies are certainly as important as space in art classes. More effort should be made to coordinate shop with art activities in high schools. In this way, supplies could be shared and the art curriculum could be expanded to include woodcarving, metal sculpture, and architectural design. As the primary non-academic elective subject offered in high schools, more emphasis should be placed on diversity in art instruction. Space, equipment, and supplies should be adequate to provide a good selection of ceramics, sculpture, oil painting, metal sculpture, welding and jewelry making, woodcarving, drafting, silk screen, etc., as well as traditional instruction in drawing, water paint and pottery.

In our calculations of recommended art space, we have subtracted enough classroom equivalents to allow 20% of the total student enrollment to take art, 5 periods per week, with not more than 20 students in each class. This is a conservative estimate of needed art space, because it does not include space for art "majors," nor special space for large projects. Also, we made a realistic estimate of needed classroom equivalents, and we did not subtract up to the amount of 1,200 s.f. per art room, which we consider

ideal. Instead, we gave more weight to the number and quality of available spaces.

The current average class size for applied art (as opposed to Art Appreciation) is 27, a number much too large for the 800-1000 s.f. art rooms found in all high schools. Ideally art rooms should be approximately 1,200 s.f., equipped with large work tables, and good natural lighting supplemented by fluorescent lighting. In addition, for a more effective art program, double length periods should be considered.

In our judgment, all of Boston's high schools would need to expand and/or refurbish present art space to meet the needs of the enrollments we recommend.

5. Music Facilities.

Music instruction in Boston's high schools is now suffering a pitiful neglect. Evidence is given by low pupil enrollment in music courses--less than 3% city-wide (see Appendix D). Music facilities are almost non-existent in all high schools. Two schools give no music courses at all. Others are dependent on a music teacher who visits the school one day per week. In the schools which do offer Music, with the exception of Dorchester and South Boston, it is only offered one period per week. (Music courses meet five periods per week at Dorchester High; at South Boston, Music Theory meets five times per week and Choral classes meet twice a week.)[1]

Eight of the twelve schools studied have no specialized space for music classes at all. Music, when it is offered, is usually given in the school auditorium, where acoustical problems both for performers or listeners and for nearby non-music classrooms are obvious. Only the J.E. Burke has a choral practice room that is used as such, and it is poorly equipped. Boston Latin School has renovated several basement rooms, which allows it to offer a varied music program; however, the space is makeshift.[2] Boston Tech has a "Band Room" in

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[1]From statistics provided by the Data Processing Center, Boston Public Schools: "Master Schedule of Course Assignments 03/05/70."

[2]Music courses at Boston Latin School were not included in the Data Processing print outs. All information is based on survey data from the head master.

the basement, but it is not used. Roslindale has a "Music Appreciation" room which might better be a closet, since it is only 250 s.f. The other schools have no music space available.

Equipment is as much of a problem as space. In no school did we observe sound equipment which affords proper fidelity for music appreciation or music history courses. (Possibly with the exception of Boston Latin, where the rooms were not open when we went through.) Risers for choral practice were absent almost without exception. Several auditoriums have a piano as the only special "equipment" for music classes. And, Brighton and Tech lack even a piano.

Course variety is low. Only five schools in our study have glee clubs, and one of these is the city-wide glee club at East Boston High.[1] South Boston and Boston Latin have the only orchestras in the city. Seven schools offer music appreciation courses, but even these are under subscribed.

We do not feel that the present low enrollment in music courses is indicative of lack of interest. Obviously, deemphasis on the quality and variety of music instruction has discouraged many students who would otherwise take music courses. In a program aimed at extending the range of elective courses, the need for increased music facilities is evident.

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[1]The city-wide glee clubs and orchestras at East Boston and the Latin Schools are not, strictly speaking, part of the music curriculum, since they are after school, non-credit programs.

Better facilities (and increased staffing) are necessary to achieve greater student participation in music programs. For this reason, we have subtracted one classroom equivalent in all schools where no specialized space for music is now available. One room is probably not enough for an adequate and diversified program of applied (instrumental and choral) and theoretical (appreciation, history, and harmonics) music courses; but it will be a start toward correcting this most pressing inadequacy. NESDEC recommends a music space of 1,200 s.f. minimum. Thus, our assignment of one classroom equivalent (800 s.f.) is most conservative.

6. Cafeterias.

Cafeteria space in Boston's high schools is generally drab, crowded, and noisy. Most schools require three crowded and hectic shifts of lunch to serve their current enrollments. Furnishings are dilapidated and sometimes insufficient to seat all students. Only three schools provide any separate space for faculty to eat; and only at Girls High is this space potentially adequate in size and quality (although it is not now being used). In most schools the kitchen facilities and food preparation areas are inadequate and cramped. Equipment is antiquated or even unsafe. Ample storage is generally lacking.

Evaluation of cafeteria facilities and recommendations for change have been based on three criteria: 1) can the present cafeteria serve the estimated educational capacity of the rest of the school? 2) is there a separate faculty lunchroom now available, and if not would present cafeteria space be released for faculty under the Actual Capacity? 3) is the kitchen and preparation space now available sufficient to serve the Actual Capacity?

Under the Actual Capacities arrived at, all schools would be able to seat and serve their enrollments comfortably in three shifts of lunch. In addition, all schools where necessary would have additional space into which they

could expand kitchen or preparation space. Five schools would be able to handle lunch in two shifts if they wished and would still have room to expand their kitchens into the present dining area.

Faculty lunchrooms are needed at all schools. Lowering enrollment might in some cases release enough dining space to make it feasible to partition an area of the lunchroom for faculty dining. If not, space would have to be found elsewhere. Consequently, in five schools we subtracted one classroom equivalent for provision of a faculty lunchroom.

We consider separate faculty dining to be a high priority item. Better dining facilities must be provided in all schools for the welfare and comfort of students and teachers alike.

7. Health Suite.

Health facilities in all schools with the exception of Girls High are inadequate in either space, privacy, or both. At least four schools have only 300 s.f. available for office, cots, and examining space. South Boston has no toilets in the Health suite. Many of the "suites" are just one space without any partitioning for privacy. In addition, many have antiquated equipment which must be replaced.

In about half of the twelve schools we subtracted ½ classroom equivalent for the expansion of the health facility. In all schools it is recommended that the health facility be properly partitioned and equipment updated.

8. Staff Spaces, Administration, Guidance.

The staff spaces evaluated in the high schools were administrative offices, teachers' offices, teachers' dining, teachers' lounges, and guidance offices. Administrative spaces appeared just about adequate in most schools. Dorchester and South Boston are the only schools that stand out as having cramped and crowded administrative space. Other staff space is, however, generally lacking or extremely inadequate.

Only Girls High and South Boston have a separate and private dining area for faculty. In all other schools the teachers must eat in the students' lunchroom. At South Boston, the space teachers use for dining is extremely primitive, being used also as storage for teachers' materials and for student records. Only because of the availability of the former Home Economics Suite is Girls High able to offer the teachers a private area that can be considered their own.

Four high schools have no lounge for teachers to relax or to use during their free periods. The other schools have spaces for teachers that are small and inadequate, usually poorly furnished, dilapidated, and depressing. Only at the J.E. Burke and at Girls Latin are the lounges at all adequate by comparison with the other schools.

Teachers have no offices at most schools. The Burke and Tech have adequate space for offices, but the majority of the schools lack decent offices even for department heads, who often share what little space is available with a book storage room. Space for teacher planning and conference rooms is virtually non-existent.

The most serious inadequacy in staff space is in guidance facilities. Facilities for guidance counselors are mostly cramped and inadequate. Often there are no enclosed spaces so that counselors can confer with students privately. Waiting and browsing space is usually non-existent. Most of the schools have three or four counselors in a space of 400-500 s.f. The space at Girls High is adequate due to the presence of only two counselors and a small student body. Dorchester is the only school that has as much as 1,000 s.f. for its four counselors.

In most schools we considered that between one and two classroom equivalents would be necessary to meet total staff space inadequacies. However, this was a fairly conservative estimate for two reasons. First, we felt that with inadequacies in so many areas in each school, more emphasis should be placed on the need for student spaces. Second, we did not recommend that special space be set aside for conferences, and it was difficult to determine how much other office space would be necessary. If one office per department head were made

available, in most schools we felt it would take too much sorely needed classroom space out of circulation. In addition, it was felt that lounges and relaxation spaces might be combined with teachers' dining where separate teachers' dining could be made available. As noted in the section on Cafeterias, one classroom equivalent was subtracted in five schools to provide a faculty dining area.

9. Home Economics.

All of the co-educational and girls' schools with the exception of Girls Latin have some provision for teaching Home Economics. The two schools that have a Home Economics suite--Brighton and Girls High--do not use them as such. At Girls High the suite is used informally as a teachers' lounge and dining room (if desired), as a conference area, and for special student project activities. The head master at Brighton would like to convert the suite into a faculty lounge.

Girls High, Jamaica Plain, and Roslindale have no facilities to teach cooking. Home Economics is restricted to one sewing room in each school. The remainder of the schools have one cooking room plus one or more sewing rooms. However, at South Boston, the cooking room is also used as a general classroom.

The J.E. Burke has the best provision of space for Home Economics--three sewing and one cooking room--all in excellent condition. Most sewing rooms were in good condition and appeared adequate at about 800 s.f. However, the cooking rooms at 800 s.f. may be too small.

Classroom equivalents were not subtracted for inadequate Home Economics space; however, these inadequacies were noted where applicable in the reports on each school (see Appendix B).

10. Business Education.

Business education appears to be the area of activity in the high schools that is most adequate in terms of space and equipment. As a result of the availability of federal aid, many of the typing and business machines rooms are carpeted, well-equipped with fluorescent lighting, and are furnished with new desks and machines. However, the two Latin Schools have no special space available at this time for instruction in typing. The head masters of both schools would like to have at least one typing room in each school.

11. Student Activities.

Except for a small "yearbook room" at one or two schools there are no spaces available for student activities or lounge areas during the school day in any of the Boston high schools. In the twelve schools surveyed, virtually no space was available for band or individual instrumental practice rooms, newspaper, literary or art magazines, school store or bank, or student council rooms. We did not subtract space to provide for these activities (though under Actual Capacity space for some of them might be found), but it is our feeling that wherever possible the high schools should incorporate these academically-related activities into the school day.

Additionally, we recommend that consideration be given to releasing space for student conference and relaxation areas--perhaps by opening the dining area of the cafeteria during non-lunch hours for student use.

APPENDIX B

REPORTS ON INDIVIDUAL SCHOOLS: SPACE INADEQUACIES, PHYSICAL CONDITION, AND ACTUAL CAPACITY COMPUTATION

BOSTON LATIN SCHOOL

CURRENT ENROLLMENT:	2074
HEAD MASTER'S CAPACITY ESTIMATE:	1600
SARGENT CAPACITY:	2230
RECOMPUTED CAPACITY:	2095
ACTUAL CAPACITY:	1800

SPACE INADEQUACIES:

LIBRARY: Small and cramped--1,000 s.f. for 10,000 volumes; seating capacity of about 40; should be expanded.

SCIENCE: Chemistry lab needs rehabilitation; need new physics lab--now using two small rooms; they might be made into project spaces or seminar rooms; average class size for science now 33.

GYM: One gym divided into two areas by a folding wall; also one weight room--improvised space of 800 s.f.; total P.E. space 8,100 s.f.; more space needed; P.E. instructor wants twice as much; new lockers and showers are needed.

ART & MUSIC: Basement recently renovated and has adequate space for art and music. Large art room may be necessary in addition.

STAFF SPACE: Additional space needed.

HEALTH SUITE: Inadequate size.

CAFETERIA: 8,000 s.f.; at Actual Capacity three shifts of lunch would still be necessary, but enough space would be released to provide a faculty lunchroom.

AUDITORIUM: Excellent condition; capacity 1100.

LANGUAGE LAB: One room equipped for 28 students; cramped.

TYPING: Students and head master would like to have space for this activity.

STUDENT ACTIVITIES: Only space is a yearbook room in basement.

GENERAL CONDITION: Building is in poor condition; requires repointing throughout; classrooms in generally good condition; toilets require modernization. Head master would like a new wing added adjacent to the present building to house an expanded library and fine arts area.

SPACE NEEDS IN CLASSROOM EQUIVALENTS: RECOM. CAP. 2095

2½ Library
4 Science
1½ Art & Music
1 Staff
½ Health
1 Typing

10½ Classroom Equivalents

10½ x 28 x .85 = 250

Small blanket reduction for some gym space. To accommodate Actual Capacity, gym will still have to be enlarged 1 2/3 times, 9,900 s.f. The new English High to be built across the street will include a considerable amount of gym space. It is possible that this can offer some relief to the overcrowded facilities at Boston Latin, but not to any great extent.

ACTUAL CAPACITY: 1800

BOSTON TECHNICAL HIGH SCHOOL

CURRENT ENROLLMENT:	1878
SARGENT CAPACITY:	2010
RECOMPUTED CAPACITY:*	1848
ACTUAL CAPACITY:	1700

*Based on same space allocation as Sargent Report, using revised classroom capacities.

SPACE INADEQUACIES:

LIBRARY: Space inadequate--located in balcony of public library; students effectively excluded from use of public library--not allowed during day--encouraged to leave right after school is out. Would be adequate space if public library space were truly available.

SCIENCE: Number of labs adequate, but quality unimpressive; need renovation and modern equipment.

GYM: Need expanded and renovated gym space and better equipment. No locker facilities; these should be provided, with showers.

ART: One room; poorly equipped and depressing; requires renovation; only 2.8% take ANY art.

MUSIC: Instrumental practice room of 1,200 s.f., but no music classes are given.

GUIDANCE: Space inadequate and cramped.

STAFF SPACE: Generally adequate; no faculty lunchroom or conference room.

HEALTH SUITE: Suite area adequate, but requires redesign for privacy and efficiency.

CAFETERIA: Appears adequate.

AUDITORIUM: Disgraceful; broken windows let pigeons in; depressing.

STUDENT ACTIVITIES: Yearbook room @ 800 s.f.

LANGUAGE LAB: Inoperative due to vandalism.

SHOPS: Excellent.

GENERAL CONDITION: Depressing; dilapidated; evidence of very poor and careless maintenance and vandalism; unless conditions are improved may have to abandon as a school. Floors require cleaning and renovation. Toilets poorly maintained and poorly ventilated. Auditorium, gyms, classrooms--almost all facilities except cafeteria--show effects of dilapidation, vandalism, and poor maintenance. Students are disturbed by general conditions; submitted report to mayor, school committee, etc. 1/19/70, "Existence at Boston Technical High School." Conditions more inexcusable since building is structurally sound, has plenty of space, and was rehabilitated in 1960 at a cost of over $1 million.

It appears that adequate space is available, but rearrangement may be necessary.

THE FOLLOWING CLASSROOM EQUIVALENTS WERE SUBTRACTED:

2 Library
1 Art
½ Guidance
1 Faculty Dining
2 General Classrooms

6½ Classroom Equivalents

6½ x 28 x .85 = 155 RECOM. CAP. 1848

ACTUAL CAPACITY: 1700

School could function well at 1700, but would still need another 5,000 s.f. of gym space.

BRIGHTON HIGH SCHOOL

CURRENT ENROLLMENT:	1328
BOY-GIRL RATIO:	about equal
HEAD MASTER'S CAPACITY ESTIMATE:	1300
SARGENT CAPACITY:	1400
RECOMPUTED CAPACITY:	1211
ACTUAL CAPACITY:	1000

SPACE INADEQUACIES:

LIBRARY: About 2,000 s.f.; adequate though less than ideal; includes 2 small spaces; could use more tables.

SCIENCE: 2 real science labs @ 800-900 s.f. plus a number of rooms used as such. Very poor condition; labs are much too small, antiquated, and poorly equipped; require expansion, plus adjacent storage and office space; some outlets not operable.

GYM: Inadequate space. One gym divided into about 5,200 s.f. for boys, 2,100 s.f. for girls. Gym in poor physical condition; need lockers for boys, better dressing area for girls; functioning showers for both.

ART: Art rooms are cluttered and inflexible; storage space is insufficient; furniture depressing.

MUSIC: No music room. Music appreciation offered but few participate.

GUIDANCE: Space adequate for three present counselors; additional personnel would cramp this area.

STAFF SPACE: Very little office space. No faculty lunchroom or common lounge; all available spaces inadequate.

HEALTH SUITE: Cramped; total of 450 s.f.

CAFETERIA: Kitchen very crowded; space miniscule; requires expansion and proper ventilation.

AUDITORIUM: Good room but poorly maintained; capacity about 1,000.

GENERAL CONDITION: School was painted last summer (1969) and in general, it is attractive, in good shape, appears to be well maintained. Some vandalism; but one of the better Boston high schools, from the point of view of appearance and condition. Head master wants to convert Home Ec. Suite to a faculty lounge. Language lab and audio-visual facilities would be desirable. Poor lighting in library.

STUDENT ACTIVITIES: No specialized space provided.

Given the lack of adequate space for special facilities, roughly the following additional space is required.

SPACE NEEDS IN CLASSROOM EQUIVALENTS: RECOM. CAP. 1211

1 Library
3 Science
1 Art
1 Music
½ Guidance
1 Staff (Conference and Lounge)
½ Health

8 Classroom Equivalents

8 x 28 x .85 = 190

Small blanket subtraction for gym space.

ACTUAL CAPACITY: 1000

At 1000 students, Brighton would still need 2,700 s.f. of gym space. If possible the present gym, which is now partitioned, should be turned over to the boys or girls exclusively and a new gym should be built.

DORCHESTER HIGH SCHOOL

CURRENT ENROLLMENT:	1626
BOY-GIRL RATIO:	6/10
HEAD MASTER'S CAPACITY ESTIMATE:	1500
SARGENT CAPACITY:	1020
RECOMPUTED CAPACITY:*	988
ACTUAL CAPACITY:	900

*Based on two teaching stations per gym; computation does not include 12 temporary classrooms behind school building.

SPACE INADEQUACIES:

LIBRARY: Extremely inadequate; only 900 s.f.

SCIENCE: Space allotment OK; labs poorly equipped and too small; preparation room inadequate in size; need more hoods in chemistry rooms, more sinks in biology rooms. Low student participation in science courses.

GYM: Two large (over 6000 s.f.) gyms plus available outdoor recreation space. Class average for boys now 60/class; girls 68. Both gyms in fairly good condition; require more showers for girls and better ventilation in dressing rooms.

ART: The three existing art rooms are poorly equipped and lack wash basins. Rooms are small.

MUSIC: No music room. Music appreciation and glee club apparently use auditorium.

GUIDANCE: Space inadequate.

STAFF SPACE: Administration crowded. No teacher's lounge or dining area.

HEALTH SUITE: Too small; about 300 s.f.; lacks privacy and proper toilet.

CAFETERIA: Satisfactory condition; kitchen large; storage ample and convenient.

AUDITORIUM: Good condition; capacity 1,000

SHOPS: Used only by cooperative industrial students.

STUDENT ACTIVITIES: Head Master would like a student lounge.

GENERAL CONDITION: Provision for use of audio-visual equipment inadequate; classrooms lack blackout curtains. Building now terribly overcrowded, but most fixed facilities are in pretty good condition.

The following is a conservative estimate of additional space necessary to meet space inadequacies.

SPACE NEEDS IN CLASSROOM EQUIVALENTS: RECOM. CAP. 988

2 Library
1 Music
½ Staff (Administration)
½ Health

4 Classroom Equivalents

4 x 28 x .85 = 95

ACTUAL CAPACITY: 900

If additional classroom space could be added, Dorchester could probably accommodate students up to its present gym capacity of 1310 students.

EAST BOSTON HIGH SCHOOL

CURRENT ENROLLMENT:	1214
BOY-GIRL RATIO:	fairly balanced
HEAD MASTER'S CAPACITY ESTIMATE:	1500
SARGENT CAPACITY:	1590
RECOMPUTED CAPACITY:	1443
ACTUAL CAPACITY:	1300

SPACE INADEQUACIES:

LIBRARY: Inadequate for current needs; librarian requests twice as much space or about 2,500 s.f. Building has two study halls adjacent to present library which seem inadvisable to maintain; could better be converted to library use.

SCIENCE: Science labs small; about 800 s.f.; poorly equipped; electrical and gas outlets at student stations inoperative; require renovation.

GYM: One gym (5400 s.f.) in poor condition; class sizes range from 40-110 students; no lockers for boys; girls dressing room and lockers in poor condition. Both boys and girls showers require renovation. Some outdoor space is available.

ART: Not enough space. One existing space; poorly equipped; lacks adequate space for storage. About 50-60 students cannot take art each year due to lack of space. Unused Drill Hall may possibly be renovated to accommodate three art teaching stations.

MUSIC: No music space and no real music program. Auditorium is used for choral education, but very few are enrolled.

GUIDANCE: Very cramped quarters.

STAFF SPACE: No staff offices and conference rooms. Inadequate space for teachers' lounges and dining; no separate lunchroom for faculty.

HEALTH SUITE: New; and satisfactory.

CAFETERIA: Two cafeterias at different locations; one for those who bring lunch; one for those who buy lunch. Space adequate, but facility drab and inconvenient.

AUDITORIUM: Condition not too good; ceiling needs repairs.

STUDENT ACTIVITIES: No space seen.

GENERAL CONDITION: Building appears structurally sound, but physical plant in poor condition; poorly maintained. Blackboards old; outlets insufficient and inoperable; poor audio-visual equipment. Toilets filthy. Lighting requires modernization. Some vandalism; many rooms badly need cleaning; much general deterioration.

SPACE NEEDS IN CLASSROOM EQUIVALENTS: RECOM. CAP. 1443

2 Science
3 Art
1 Music
1 Faculty Dining

7 Classroom Equivalents

7 x 28 x .85 = 167

ACTUAL CAPACITY: 1300

School appears able to function adequately at 1300, if space available is made more usable and gym facilities are expanded (by 7,600 s.f.).

GIRLS HIGH SCHOOL

CURRENT ENROLLMENT:	454
HEAD MASTER'S CAPACITY ESTIMATE:	1000
SARGENT CAPACITY:	900
RECOMPUTED CAPACITY:	762
ACTUAL CAPACITY:	650

SPACE INADEQUACIES:

LIBRARY: 1,200 s.f.; should be expanded with more books; needs new lighting.

SCIENCE: Very little storage space; need to be renovated and expanded; need full-fledged physics lab, instead of present "general science-physics" room. Biology lab equipped with water only at demonstration table.

GYM: Small; 3,000 s.f.; no usable dressing area; staff space too small; showers inoperable. No toilets adjacent to gym space; no mirrors in dressing area.

ART: The two currently used rooms are small; crowded and cluttered; storage is inadequate. Need additional space for work in progress, storage, and large project work.

MUSIC: No space; classes in auditorium.

GUIDANCE: Two separate spaces; should be coordinated and replanned; present space unwieldy.

STAFF SPACE: Adequate space available; use should be reallocated. Home Ec. suite could be formally converted to a teachers' lounge and lunchroom. Department heads now share office space.

ADMINISTRATION: Sufficient space except for Assistant Head Master; now in a bookroom. This should be changed.

HEALTH SUITE: Space adequate; condition good.

CAFETERIA: Capacity 235-240. Even with three shifts present cafeteria would be crowded with Actual Capacity. Storage for kitchen needed; both kitchen and cafeteria dining area require expansion.

AUDITORIUM: Good condition; though difficult to heat; capacity 607-700.

HOME ECONOMICS: Only sewing now offered.

SPECIAL STUDENTS: 2 spaces set aside; can accommodate 36 special students.

STUDENT ACTIVITIES: No specialized space provided.

GENERAL CONDITION: Classrooms generally good; storage space cramped; corridors dark and dingy; new lighting needed; alsc painting; but school is generally in decent shape. Now quite under utilized.

SPACE INADEQUACIES IN CLASSROOM EQUIVALENTS: RECOM. CAP. 762

1 Library
1 Science
1 Art
1 Music
1 Kitchen Expansion

5 Classroom Equivalents

5 x 28 x .85 = 119

ACTUAL CAPACITY: 650

Even at a capacity of 650, an additional 3,500 s.f. of gym space would be necessary at this school.

GIRLS LATIN SCHOOL

CURRENT ENROLLMENT:	1208
HEAD MASTER'S CAPACITY ESTIMATE:	now overcrowded
SARGENT CAPACITY:	1250
RECOMPUTED CAPACITY:*	1182
ACTUAL CAPACITY:	980

*Language listening room @ 200 s.f. not counted.

SPACE INADEQUACIES:

LIBRARY: Cramped and crowded; 1250 s.f. in two separate rooms; little space for seating.

SCIENCE: Presently 5 labs @ about 900 s.f. each. No physics lab. Need additional science lecture space; expansion and modernization of chemistry space, and better equipping of biology labs. Some storage; need more.

GYM: 4,900 s.f.; need additional space; no lockers or usable showers. Gym floor requires repair.

ART: One adequate space with storage down the corridor; cafeteria now used as second space--inconvenient; no storage space for work in progress. Large loft room on third floor is burned out, but if renovated would be a wonderful art room.

MUSIC: No music rooms. Auditorium and large 60-seat classroom used; lack provision for instrumental practice and music listening.

GUIDANCE: Space extremely inadequate and cramped; suite about 400-500 s.f.; lacks private cubicles; browsing area is limited.

STAFF SPACE: Only available office space for English Dept.; no teachers' lunchroom or common lounge.

HEALTH SUITE: Space lacks privacy; about 500-600 s.f.; should be enlarged slightly.

CAFETERIA: Lunchroom now crowded. Kitchen cramped; should be expanded.

AUDITORIUM: Capacity 600; requires renovation of seats and furnishings.

STUDENT ACTIVITIES: Small yearbook room; 250 s.f.

TYPING: No such facility now available; though would be desirable.

GENERAL CONDITION: Classrooms are in good shape and school is very well maintained. Recently painted and generally clean and attractive. Classroom storage very limited. Toilets are antique and require modernization.

SPACE INADEQUACIES IN CLASSROOM EQUIVALENTS: RECOM. CAP. 1182

2 Library
2 Science
1 Art
1 Music
½ Guidance
1 Staff
1 Typing

8½ Classroom Equivalents

8½ x 28 x .85 = 202

No blanket reduction made for needed additional gym space.

ACTUAL CAPACITY: 980

School would function well at 980, if its physical education space were doubled (need an additional 4,900 s.f.).

HYDE PARK HIGH SCHOOL

CURRENT ENROLLMENT:	1716
BOY-GIRL RATIO:	7/9
ACCREDITATION COMMITTEE RECOMMENDATION:	add 15 classrooms for 1700
SARGENT CAPACITY:	1430
RECOMPUTED CAPACITY:	1322
ACTUAL CAPACITY:	1100

SPACE INADEQUACIES:

LIBRARY: Presently 2,000 s.f.; should be enlarged by at least 800 s.f.; also now used as homerooms and study halls.

SCIENCE: Present rooms small and require modernization; not all rooms presently being used for science are equipped for it. All rooms lack electricity.

GYM: One gym partitioned into two inadequate spaces; boys 4,800 s.f., class average now 42; girls 2,400 sf, class average now 51. Need one new gym and new dressing and shower area for both boys and girls. No lockers now available. Outdoor recreation space not readily available.

ART: 2 rooms; spaces small and inadequate; average class now 24. Rooms require expansion; better equipment; and modernization. Should have one more room for school this size under actual capacity.

MUSIC: No courses now offered; no space available.

GUIDANCE: Presently 4 counselors in only two offices; need at least doubling of space for this activity plus a waiting area.

STAFF SPACE: No teachers' lounge or dining area.

HEALTH SUITE: Space too small; requires expansion.

CAFETERIA: Capacity about 525; kitchen very cramped--requires expansion. New equipment and more storage space necessary.

AUDITORIUM: Capacity 828; condition is good; equipped with permanent screen.

STUDENT ACTIVITIES: No specialized space provided.

GENERAL CONDITION: Building generally insufficient and cramped in terms of space for current enrollment and space for major special activities. Structurally sound but antique toilets must be modernized, and lighting must be improved. The Accrediting Committee reported that Home Economics space was inefficiently used.

SPACE INADEQUACIES IN CLASSROOM EQUIVALENTS: RECOM. CAP. 1322

1 Library
2 Science
1 Art
1 Music
½ Guidance
½ Health
2 General Classrooms

8 Classroom Equivalents

8 x 28 x .85 = 190

Small deduction for gym space.

ACTUAL CAPACITY: 1100

Hyde Park could function comfortably at 1100 students, although it would still need an additional 3,800 s.f. of gym space.

JAMAICA PLAIN HIGH SCHOOL

CURRENT ENROLLMENT:	728	
BOY-GIRL RATIO:	1/2	
ACCREDITATION COMMITTEE RECOMMENDATION:		Cap. 500
SARGENT CAPACITY:	840	
RECOMPUTED CAPACITY:	793	
ACTUAL CAPACITY:	500	

SPACE INADEQUACIES:

LIBRARY: Totally inadequate; only 800 s.f.; former classroom.

SCIENCE: All science spaces small; 800 s.f.; must be enlarged. Chemistry lab new and in good condition. Others in poor condition;physics lab very poorly equipped. Room of 500 s.f. used as biology lecture space.

GYM: One gym; wholly inadequate and in poor condition; very small; 3,000 s.f.; poorly equipped. No lockers and showers--now being installed. Classes now meet only twice a week. Need an additional gym space.

ART: One of two existing rooms requires enlargement. Both fair to poor condition. As one of the few electives offered, this subject is overcrowded, under-equipped.

MUSIC: No music space; no music courses given except Choral Music, offered once a week in the auditorium.

GUIDANCE: Available space barely adequate. Offices small; 100 s.f. Require additional space--300-400 s.f.

STAFF SPACE: Need office space; none now worth mentioning. Also need conference space, additional custodial space. No faculty lunchroom.

HEALTH SUITE: Suite inadequate; very small, 300 s.f.; requires expansion and provision for privacy.

CAFETERIA: Capacity about 350; condition adequate. Kitchen very small; storage area not large enough and inconvenient; requires expansion.

AUDITORIUM: Capacity 490; condition poor.

STUDENT ACTIVITIES: No specialized space provided.

SHOPS: Used only by Cooperative agricultural students.

HOME ECONOMICS: Only sewing now offered.

GENERAL CLASSROOMS: There are two small classrooms that are unfeasible for general classrooms around 300 s.f., may be used as seminar rooms.

GENERAL CONDITION: Building small, drab, and poorly equipped. Student toilets in basement only. There is provision for use of audio-visual equipment in the classrooms.

SPACE INADEQUACIES IN CLASSROOM EQUIVALENTS: RECOMP. CAP. 793

½ Health
2 Library
2 Science
1 Music
1 Guidance and Offices
1 Faculty Dining
2 General Classrooms

9½ Classroom Equivalents

9½ x 28 x .85 = 226

Blanket reduction for some additional gym space.

ACTUAL CAPACITY: 500

This school can function as an adequate high school for 500 students, if gym space is increased by 2,000 s.f. Otherwise, it should be abandoned as a high school facility.

JEREMIAH E. BURKE HIGH SCHOOL

CURRENT ENROLLMENT:	1055
BOY-GIRL RATIO:	all girls
HEAD MASTER'S CAPACITY ESTIMATE:	currently at full capacity
SARGENT CAPACITY:	1200
RECOMPUTED CAPACITY:*	1080
ACTUAL CAPACITY:	950

*Based on 25 students per general classroom; two teaching stations in gym.

SPACE INADEQUACIES:

LIBRARY: Presently 1,200 s.f.; librarian would like twice as much space.

SCIENCE: Appear to have enough spaces allocated, although all rooms are small; about 800 s.f.; all resource outlets are operative. Student enrollment in science courses is low.

GYM: Gym is in good condition. However, must handle 75-80 per gym period. Showers are inoperative; require modernization and expansion.

ART: Rooms small, tight and crowded; no room to move; minimum storage;work tables too small.

MUSIC: Only Music Room in the city. Good sized; fair condition; but poorly equipped to offer a variety of music courses.

GUIDANCE: Two small offices for 3 counselors; will move into classroom being converted for guidance use.

STAFF SPACE: All department heads have offices, which also serve as book rooms. Assistant Head Master's office too small. No faculty dining. No conference space, especially for meeting with parents.

HEALTH SUITE: One room; small and ill-equipped; lacks privacy; room is heavily used and requires expansion and better equipment.

CAFETERIA: Capacity 400; kitchen too small and storage inadequate.

AUDITORIUM: Needs extensive renovation; needs new seats and windows; steps outside broken; capacity about 1,000.

STUDENT ACTIVITIES: No space.

GENERAL CONDITION: Building in fairly good condition; lighting is all fluorescent; blackboards, storage, and audio-visual equipment are all better than in most of the high schools. All general classrooms are a little smaller than average, 715 s.f.

SPACE INADEQUACIES IN CLASSROOM EQUIVALENTS: RECOM. CAP. 1080

2 Library
1 Art
½ Guidance
½ Administration
½ Health
1 Faculty Dining

5½ Classroom Equivalents

5½ x 28 x .85 = 131

ACTUAL CAPACITY: 950

At 950 students, the Burke would still need approximately 3,100 s.f. of gym space.

ROSLINDALE HIGH SCHOOL

CURRENT ENROLLMENT:	1370
BOY-GIRL RATIO:	1/2
HEAD MASTER'S CAPACITY ESTIMATE:	much overcrowded
SARGENT CAPACITY:	1160
RECOMPUTED CAPACITY:*	1011
ACTUAL CAPACITY:	800

*Music room @ 250 s.f. and Vision Resources room not included.

SPACE INADEQUACIES:

LIBRARY: Very small; 600 s.f.; needs much more space.

SCIENCE: 5 Science rooms; science labs are all small and in poor condition, but all are undergoing rehabilitation; could use more space for expansion of rooms.

GYM: Painfully small; only 4,300 s.f.; students able to take P.E. only 1 period per week. Girls classes now average 72. Boys and girls share same facility now and must divide time allotments accordingly; should have another gym. Boys have no lockers; showers for both boys and girls are inadequate; must be improved. Ventilation required in both dressing rooms.

ART: 2 rooms; one a former shop. Fairly well equipped; could use greater variety of supplies and more storage space.

MUSIC: Music activity is limited; only Music Appreciation offered. One room of 250 s.f. is used for Music; totally inadequate.

GUIDANCE: Space is cramped; now expanding into administrative space.

STAFF SPACE: No teachers' conference or office space. Common faculty lounge presently being rehabilitated. No separate teachers' dining.

HEALTH SUITE: Too small for isolation and privacy.

CAFETERIA: Capacity 450; kitchen small and cramped; needs to be enlarged.

AUDITORIUM: Capacity 575; needs maintenance and renovation; lacks large permanent screen.

STUDENT ACTIVITIES: None seen.

SHOPS: No space and no courses now offered.

HOME ECONOMICS: Only sewing now offered.

GENERAL CONDITION: Building was built as a junior high school; is greatly overcrowded now. Classrooms in good condition; storage space minimal. Drinking fountains sometimes too low for high school students. Accrediting Committee criticized maintenance, limited Music and Home Economics offerings. No shop space now available. Audio-visual equipment is better than most schools--blackout curtains, overhead and film projectors and screens in many classrooms. Entire school has fluorescent lighting.

SPACE INADEQUACIES IN CLASSROOM EQUIVALENTS: RECOM. CAP. 1011

3 Library
2 Science
1 Music
½ Health
½ Staff Offices
1 Faculty Dining

8 Classroom Equivalents

8 x 28 x .85 = 190

ACTUAL CAPACITY: 800
Small blanket reduction for additional gym space.
Roslindale would function as a reasonably well equipped school at a capacity of 800, but an additional 3,700 s.f. of gym space would still be needed.

SOUTH BOSTON HIGH SCHOOL

CURRENT ENROLLMENT:	1853
BOY-GIRL RATIO:	about equal
SARGENT CAPACITY:	1250
RECOMPUTED CAPACITY:	1158
ACTUAL CAPACITY:	950

SPACE INADEQUACIES:

LIBRARY: Only 800 s.f.; should be enlarged.

SCIENCE: Labs small; only 3 rooms equipped for science; all rooms should be expanded; all in very poor condition; need new equipment and at least 3 new rooms.

GYM: Totally inadequate; boys space about 3,000 s.f.; girls about 2,000 s.f.; average class size now boys 58, girls 55. Not in any way specially equipped as a gymnasium. Dressing room conditions primitive and unsatisfactory. Boys have no lockers. There are a few working showers but more are needed.

ART: Space cramped; cluttered and dingy; lack proper work tables and special equipment; two spaces.

MUSIC: No music room. Do have extensive music program; use auditorium.

GUIDANCE: Cramped and inadequate; 800 s.f. for four counselors; one counselor has no privacy; no browsing area.

STAFF SPACE: Administration space very cramped; staff lounges and offices inadequate. No conference space. Teachers dining shared with storage space--primitive and inadequate.

HEALTH SUITE: Suite too small; 300 s.f.; lacks toilet.

CAFETERIA: Capacity 636; in two rooms; kitchen between 2 cafeterias is cramped and requires expansion; Cafeterias also now used as homerooms.

AUDITORIUM: Capacity 1050; needs some looking after, e.g. stage floor and lighting.

STUDENT ACTIVITIES: No space seen.

GENERAL CONDITION: School extremely crowded and poorly maintained. Classrooms are dingy; furniture is antiquated; toilets are ancient and poorly maintained. Little provision for audio-visual equipment. The curriculum offered is quite broad and many unusual courses are offered despite the extreme lack of adequate space. New lighting being installed throughout building.

SPACE INADEQUACIES IN CLASSROOM EQUIVALENTS: RECOM. CAP. 1158

3 Library
1 Art
3 Science
1 Staff
1 Music

9 Classroom Equivalents

9 x 28 x .85 = 214

ACTUAL CAPACITY: 950

At Actual Capacity, South Boston would still need the equivalent of 1,100 s.f. of gym space for all students, or 2,050 s.f. for the girls.

APPENDIX C

SUMMARY OF CRITICISMS MADE BY THE VISITING COMMITTEES OF THE NEW ENGLAND ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS

In 1969, four Boston high schools were reviewed by Visiting Committees representing the New England Association of Colleges and Secondary Schools. Recommendations of the Visiting Committees are usually followed by the Association in deciding whether to extend or deny accreditation to high schools. The reports on Hyde Park, Jeremiah E. Burke, Jamaica Plain, and Roslindale High Schools were examined, and appropriate comments from the reports are summarized below. Although the Visiting Committees were oriented more toward programs and curricula, they did comment about facilities and physical conditions, and their conclusions agreed with the emphasis in our survey on the need for larger and improved special facilities. The areas singled out for expansion and/or improvement were as follows:

ART & MUSIC--Expansion of programs.

SCIENCE--Modernized and safer labs.

LIBRARY--Expansion into full-fledged, instructional, media centers; also, professional resource libraries for each major subject area, which could be included in classroom space or combined with teachers' workrooms.

Modernized KITCHEN and food storage facilities.

PHYSICAL EDUCATION--Improved and expanded facilities.

Provision of LANGUAGE LABS.

The most important changes recommended by the Visiting Committees as necessary to make each special activity area functionally adequate were as follows:

LIBRARY-- Should be a more functional part of the school program.

--Should include a workroom and desk for the librarian, a browsing area, and a separate resource area for teachers.

--Recommended professional libraries (resource areas) for each subject area.

--Should expand library collections, e.g. at Brighton High it was recommended that the book collection be increased from 4,000 to 25,000 volumes.

SCIENCE--Better and safer laboratories.

--Modern lab tables with electricity and water sources.

--Live animal facilities and greenhouses.

--Emergency showers in chemistry laboratories.

PHYSICAL EDUCATION--Enlarged facilities, including regulation-size basketball courts.

--Lockers and showers for all students.

--Improved lighting, ventilation, and heating.

MUSIC--Provision for the teaching of instrumental music.

--Provision of music practice rooms.

GUIDANCE--Private cubicles for each counselor.

-- Student waiting and browsing areas.

EATING FACILITIES--Larger Cafeterias.

--Improved furnishings.

--Larger kitchens.

--Modern kitchen equipment.

--Proper facilities for receiving and storing food.

HOME ECONOMICS--Teaching space should include unit kitchens with sink, work area, serving table, food work area, clothes washer, clother dryer, deep freeze.

OTHER--Spaces for extracurricular activities.

The Visiting Committees also noted deficiencies in size and/or number of support facilities, such as faculty work rooms, faculty dining areas, health suites, administrative offices. They made recommendations for improved general serviceability of the schools.

1. Emphasis on improved lighting throughout all schools.

2. Better storage facilities in classrooms and special spaces; for students' and teachers' materials and equipment.

3. Modernization or replacement of obsolete toilet facilities.

4. Individual lockers for each student.

5. Modernization of classrooms, especially in the categories of furniture, display space, and storage.

6. Provision for audio-visual equipment.

7. Improved heating equipment.

All of the Visiting Committees recommended a reduction in class size. Specifically, the following maximum class sizes were recommended:

ART:	20-25
GYM:	35
ENGLISH:	25
FOREIGN LANGUAGE:	25
SCIENCE LAB:	25

APPENDIX D

ENROLLMENTS IN SPECIALIZED SUBJECTS IN THE TWELVE HIGH SCHOOLS SURVEYED*

SCIENCE ENROLLMENTS

SCHOOL	TOTAL ENROL.	SUBJECT	NO. ENROL'D	NO. SECTS.	AV. SIZE	PERCENT ENROL'D	SUBJ. AV.
BOSTON LATIN	2044	Chemistry	300	12	25	14.6%	
		Physics	235	9	26	11.5%	
		Biology	409	16	26	19.9%	
		Sciences**	360	12	30	17.6%	
		Total	1304	49		63.6%	27
BOSTON TECH	1774	Chemistry	417	16	26	23.5%	
		Physics	353	17	21	19.9%	
		Biology	432	15	29	24.3%	
		Sciences	585	25	23	33.0%	
		Total	1787	73		100.7%‡	24
BRIGHTON	1335	Chemistry	115	4	29	8.6%	
		Physics	21	1	21	1.6%	
		Biology	312	12	26	23.3%	
		Sciences	337	16	21	25.2%	
		Total	785	33		55.7%	24
DORCHESTER	1794	Chemistry	55	3	18	3.1%	
		Physics	22	3	7	1.2%	
		Biology	586	25	23	32.7%	
		Sciences	279	11	27	15.5%	
		Total	942	42		42.5%	23

*All school and course enrollments are based on statistics provided by the Data Processing Center, Boston Public Schools: "High Schools: Analysis of Course Enrollment 02/18/70", and "Master Schedule of Course Assignments 03/05/70".

**"Sciences" includes all other science courses: general, applied, coop, and earth sciences; also astronomy, botany, etc. where given.

‡At Tech students take more than one major science at a time.

SCHOOL	TOTAL ENROL.	SUBJECT	NO. ENROL'D.	NO. SECTS.	AV. SIZE	PERCENT ENROL'D	SUBJ. AV.
EAST BOSTON	1270	Chemistry	108	4	27	8.5%	
		Physics	16	1	16	1.3%	
		Biology	348	12	29	27.4%	
		Sciences	334	13	26	26.2%	
		Total	806	30		63.4%	27
GIRLS HIGH	447	Chemistry	24	1	24	5.4%	
		Physics	14	1	14	3.1%	
		Biology	126	8	16	28.1%	
		Sciences	154	7	22	34.4%	
		Total	318	17		61.0%	19
GIRLS LATIN	1151	Chemistry	191	6	32	16.6%	
		Physics	63	2	31	5.5%	
		Biology	322	14	23	27.9%	
		Sciences	172	7	25	14.9%	
		Total	748	29		64.9%	26
HYDE PARK	1680	Chemistry	188	8	24	11.2%	
		Physics	49	2	24	2.9%	
		Biology	626	23	27	37.4%	
		Sciences	169	5	34	10.1%	
		Total	1032	38		61.6%	27
JAMAICA PLAIN	774	Chemistry	60	2	30	7.8%	
		Physics	13	1	13	1.7%	
		Biology	284	15	19	36.7%	
		Sciences	--	--	--	--	
		Total	357	18		46.2%	20
JEREMIAH E. BURKE	941	Chemistry	51	4	13	5.4%	
		Physics	12	1	12	1.3%	
		Biology	271	15	18	28.8%	
		Sciences	87	5	17	9.2%	
		Total	421	25		44.7%	17

SCHOOL	TOTAL ENROL.	SUBJECT	NO. ENROL'D	NO. SECTS.	AV. SIZE	PERCENT ENROL'D	SUBJ. AV.
ROSLINDALE	1339	Chemistry	162	6	27	12.1%	
		Physics	28	1	28	2.1%	
		Biology	502	19	26	37.5%	
		Sciences	67	3	22	5.0%	
		Total	759	29		56.7%	26
SOUTH BOSTON	1787	Chemistry	170	6	28	9.5%	
		Physics	45	2	23	2.5%	
		Biology	519	17	31	29.0%	
		Sciences	422	15	28	23.7%	
		Total	1156	40		64.7%	29
TOTAL TWELVE SCHOOLS	16,336	All Science	10,415			63.7%	25

ART ENROLLMENTS

SCHOOL	TOTAL ENROL.	SUBJECT	NO. ENROL'D	NO. SECTS.	AV. SIZE	PERCENT SUBJ. AV. ENROL'D
BOSTON LATIN	2044	NO DATA PROCESSING INFORMATION ABOUT ART				
BOSTON TECH	1774	Art Elect.	24	1	24	1.4%
		Art	24	1	24	1.4%
BRIGHTON	1335	Art	159	7	23	11.9%
		Art Major	61	3	20	4.5%
DORCHESTER	1794	Art	95	5	19	5.3%
		Art Major	84	6	14	4.7%
EAST BOSTON	1270	Art	144	5	29	11.4%
GIRLS HIGH	447	Art	170	10	17	38.0%
		Art Major	4	1		0.9%
GIRLS LATIN	1151	Fine Arts	170	6	29	14.8%
		Art. Apprec.	61	3	20	5.3%
HYDE PARK	1680	Art Elect.	5	1	5	0.3%
		Art	201	8	25	12.0%
		Art Major	22	1	22	1.3%
JAMAICA PLAIN	774	Art Elect.	54	3	18	7.0%
		Art	152	6	25	19.6%
JEREMIAH E. BURKE	941	Art	204	13	16	21.7%
ROSLINDALE	1339	Art Elect.	14	1	14	1.0%
		Art	278	10	28	20.7%
SOUTH BOSTON	1787	Art	271	10	27	15.1%

SCHOOL	TOTAL ENROL.	SUBJECT	NO. ENROL'D	NO. SECTS.	AV. SIZE	PERCENT ENROL'D	SUBJ. AV.
TOTAL ELEVEN* SCHOOLS	14,292	Art (Applied)	2136		27	13.0%	27
		Art Apprec.	61		20	.4%	

*Figures for Boston Latin School are not known, and therefore are not included. Survey is thus complete for eleven schools only.

MUSIC ENROLLMENTS

SCHOOL	TOTAL ENROL.	SUBJECT	NO. ENROL'D	NO. SECTS.	AV. SIZE	PERCENT SUBJ. AV. ENROL'D
BOSTON LATIN	2044	NO DATA PROCESSING INFORMATION ABOUT MUSIC				
BOSTON TECH	1774	NO MUSIC COURSES OFFERED				
BRIGHTON	1335	Music Appre.	42	5	8	3.1%
		Glee Club	?	1		
DORCHESTER	1794	Music Appre.	50	3	17	2.8%
		Glee Club	40	1	40	2.2%
EAST BOSTON	1270	Choral Pract.	5	1		0.4%
		City Glee Club	?	1		
GIRLS HIGH	447	Choral Pract.	99	5	20	22.1%
		Glee Club	47	1	47	10.5%
GIRLS LATIN	1151	Music Appre.	58	6	10	5.0%
		(Music 7 & 8	342	8	45	29.7%)
HYDE PARK	1680	NO MUSIC COURSES OFFERED				
JAMAICA PLAIN	774	NO MUSIC COURSES OFFERED				
JEREMIAH E. BURKE	941	Music Appre.	43	5	9	4.6%
		Music	60	6	10	6.4%
ROSLINDALE	1339	Music Appre.	146	12	12	10.9%

SCHOOL	TOTAL ENROL.	SUBJECT	NO. ENROL'D	NO. SECTS.	AV. SIZE	PERCENT ENROL'D	SUBJ. AV.
SOUTH BOSTON	1787	Choral Pract.	21	1	21	1.2%	
		Glee Club	179	6	30	10.0%	
		Orchestra	22	1	22	1.2%	
		Music Theory	15	1	15	0.8%	
TOTAL ELEVEN* SCHOOLS**	14,292	Music Appre.	414		11	2.9%	11
		Applied Music	413		26	2.9%	26

*Figures for Boston Latin School are not available. Survey is complete for eleven schools only.

**Totals do not include "Music 7 & 8" (342 students) at Girls Latin School.

PHYSICAL EDUCATION ENROLLMENTS AND CLASS SIZES

SCHOOL	TOTAL ENROL.	NO. GYMS	SUBJECT	NO. ENROL'D	TOTAL SECTS.	MULT. USES	CORR. FACTOR	AV. CLASS SIZE
BOSTON LATIN	2044	2½	NO DATA PROCESSING INFORMATION ABOUT P.E.					
BOSTON TECH	1774	2	Boys P.E.*	1774	72	36	36	49
BRIGHTON	1335	1 (part.)	Boys P.E.	630	23	11	12	52**
			Girls P.E.	571	17	2	15	38
DORCHESTER	1794	2	Boys P.E.	604	15	5	10	60
			Girls P.E.	819	21	9	12	68
EAST BOSTON	1270	1	Boys P.E.	592	23	8	15	39
			Girls P.E.	529	11	2	9	59
GIRLS HIGH	447	1	Girls P.E.	402	13	None		31
GIRLS LATIN	1151	1	Girls P.E.	1141	17	None		67
HYDE PARK	1680	1 (part.)	Boys P.E.	720	28	11	17	42
			Girls P.E.	915	23	5	18	51
JAMAICA PLAIN	774	1	Boys P.E.	275	9			
			Girls P.E.	381	13			
			Total	656	22	2	20	33
JEREMIAH E. BURKE	941	1	Girls P.E.***	840	23	None		37

*11th graders at Tech take gym only once a week.

**During two periods of the week the boys section of this gym is scheduled for 5 and 6 sections respectively (about 162 students).

***11th and 12th graders at Burke take gym only once a week.

SCHOOL	TOTAL ENROL.	NO. GYMS	SUBJECT	NO. ENROL'D	TOTAL SECTS.	MULT. USES	CORR. FACTOR	AV. CLASS SIZE
ROSLINDALE	1339	1	Boys P.E.*	424	11			39
			Girls P.E.	869	12			72
SOUTH BOSTON	1787	2	Boys P.E.	870	18	3	15	58
			Girls P.E.	887	20	4	16	55
TOTAL ELEVEN** SCHOOLS	14,292		All P.E.	13,243	369	98	271	49

*Boys P.E. at Roslindale meets only once per week.

**Figures for Boston Latin School are not available. Survey is complete for eleven schools only.

APPENDIX E

BOSTON HIGH SCHOOLS:

ENROLLMENTS BY NEIGHBORHOOD*

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*Based on data supplied by the Boston School Department Data Processing Center, dated 04/13/70. Percentages of 1% or less are not shown. Enrollment from outside Boston not shown. Girls Trade High School is not included; no data is available.

ENROLLMENT BY NEIGHBORHOOD

BOSTON LATIN SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
DORCHESTER		400	20%
CODMAN SQUARE	193		
FIELDS CORNER	81		
GROVE HALL	22		
UPHAMS CORNER	104		
WEST ROXBURY		299	15%
HYDE PARK		216	11%
ROSLINDALE		203	10%
MATTAPAN		179	9%
BRIGHTON/ALLSTON/BROOKLINE		177	9%
JAMAICA PLAIN		148	7%
SOUTH BOSTON		90	4%
EAST BOSTON		79	4%
CHARLESTOWN		49	2%
ROXBURY		47	2%
SOUTH END		47	2%
INTOWN BOSTON**		43	2%
TOTAL ENROLLMENT		2044	

**Includes Downtown, Fenway, Back Bay, North End, West End.

--43% of total enrollment at Boston Latin comes from West Roxbury, Hyde Park, Mattapan, Roslindale.

ENROLLMENT BY NEIGHBORHOOD

BOSTON TECHNICAL HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
DORCHESTER		656	37%
CODMAN SQUARE	263		
FIELDS CORNER	174		
GROVE HALL	61		
UPHAMS CORNER	158		
ROSLINDALE		158	9%
WEST ROXBURY		154	9%
MATTAPAN		141	8%
HYDE PARK		138	8%
JAMAICA PLAIN		125	7%
BRIGHTON/ALLSTON/BROOKLINE		105	6%
SOUTH BOSTON		85	5%
ROXBURY		83	5%
EAST BOSTON		50	3%
SOUTH END		27	1.5%
INTOWN BOSTON		27	1.5%
TOTAL ENROLLMENT		1774	

ENROLLMENT BY NEIGHBORHOOD

BOSTON TRADE HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
DORCHESTER		198	32%
CODMAN SQUARE	40		
FIELDS CORNER	24		
GROVE HALL	46		
UPHAMS CORNER	88		
ROXBURY		159	25%
JAMAICA PLAIN		44	7%
SOUTH END		36	6%
INTOWN BOSTON		25	4%
BRIGHTON/ALLSTON/BROOKLINE		19	3%
WEST ROXBURY		15	2%
ROSLINDALE		14	2%
SOUTH BOSTON		13	2%
EAST BOSTON		12	2%
MATTAPAN		11	2%
(NO DATA AVAILABLE FOR 10% OF THE STUDENT BODY)			
TOTAL ENROLLMENT		639	

ENROLLMENT BY NEIGHBORHOOD

BRIGHTON HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
BRIGHTON		460	35%
ALLSTON		200	15%
ROXBURY		159	12%
DORCHESTER		140	10%
CODMAN SQUARE	43		
FIELDS CORNER	14		
GROVE HALL	65		
UPHAMS CORNER	27		
INTOWN BOSTON		80	6%
JAMAICA PLAIN		63	5%
SOUTH END		49	4%
WEST ROXBURY		24	2%
ROSLINDALE		23	2%
TOTAL ENROLLMENT		1335	

ENROLLMENT BY NEIGHBORHOOD

CHARLESTOWN HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
CHARLESTOWN		422	55%
DORCHESTER		101	13%
CODMAN SQUARE	50		
FIELDS CORNER	41		
GROVE HALL	2		
UPHAMS CORNER	8		
NORTH END		61	8%
JAMAICA PLAIN		26	3%
ROSLINDALE		23	3%
SOUTH BOSTON		20	3%
WEST ROXBURY		16	2%
HYDE PARK		14	2%
EAST BOSTON		13	2%
BRIGHTON/ALLSTON/BROOKLINE		13	2%
TOTAL ENROLLMENT		773	

ENROLLMENT BY NEIGHBORHOOD

DORCHESTER HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
DORCHESTER		1388	78%
CODMAN SQUARE	728		(41%)
FIELDS CORNER	368		(21%)
GROVE HALL	159		(9%)
UPHAMS CORNER	133		(7%)
ROXBURY		61	3%
MATTAPAN		42	2%
(NO DATA AVAILABLE ON 15% OF THE STUDENT BODY)			
TOTAL ENROLLMENT		1794	

ENROLLMENT BY NEIGHBORHOOD

EAST BOSTON HIGH SCHOOL

NEIGHBORHOOD	NO. ENROLLED	% OF TOTAL ENROLLMENT
EAST BOSTON	1181	93%
SOUTH END	16	1.3%
TOTAL ENROLLMENT	1270	

ENROLLMENT BY NEIGHBORHOOD

ENGLISH HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
DORCHESTER		428	29%
CODMAN SQUARE	116		
FIELDS CORNER	50		
GROVE HALL	121		
UPHAMS CORNER	141		
ROXBURY		238	16%
SOUTH END		152	10%
JAMAICA PLAIN		149	10%
INTOWN BOSTON		100	7%
BRIGHTON/ALLSTON/BROOKLINE		76	5%
WEST ROXBURY		66	4%
EAST BOSTON		45	3%
ROSLINDALE		44	3%
MATTAPAN		42	3%
CHARLESTOWN		23	2%
SOUTH BOSTON		12	1%
HYDE PARK		10	1%
TOTAL ENROLLMENT		1484	

Major enrollment is from Inner-City neighborhoods: Dorchester, Roxbury, South End, Intown Boston, and Jamaica Plain. (Three of these have no District High School.)

ENROLLMENT BY NEIGHBORHOOD

GIRLS HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
ROXBURY		177	40%
DORCHESTER		137	31%
CODMAN SQUARE	31		
FIELDS CORNER	1		
GROVE HALL	53		
UPHAMS CORNER	52		
SOUTH END		67	15%
BACK BAY		8	2%
JAMAICA PLAIN		8	2%
EAST BOSTON		7	2%
TOTAL ENROLLMENT		447	

ENROLLMENT BY NEIGHBORHOOD

GIRLS LATIN SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
DORCHESTER		249	22%
CODMAN SQUARE	117		
FIELDS CORNER	51		
GROVE HALL	29		
UPHAMS CORNER	52		
WEST ROXBURY		169	15%
MATTAPAN		122	11%
ROSLINDALE		118	10%
HYDE PARK		118	10%
JAMAICA PLAIN		88	8%
BRIGHTON/ALLSTON/BROOKLINE		82	7%
EAST BOSTON		40	3%
SOUTH BOSTON		39	3%
ROXBURY		37	3%
SOUTH END		37	3%
INTOWN BOSTON		32	3%
TOTAL ENROLLMENT		1151	

For both Latin Schools, the largest proportion of enrollment is from Dorchester. Next greatest numbers of students come from W. Roxbury, Hyde Park, Mattapan, Roslindale. At Girls Latin 46% of total enrollment comes from these four areas.

ENROLLMENT BY NEIGHBORHOOD

HYDE PARK HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
HYDE PARK		804	48%
MATTAPAN		376	22%
DORCHESTER		326	20%
CODMAN SQUARE	235		
FIELDS CORNER	52		
GROVE HALL	33		
UPHAMS CORNER	6		
ROSLINDALE		47	3%
READVILLE		32	2%
TOTAL ENROLLMENT		1680	

72% of enrollment can be considered from the local district --Mattapan, Hyde Park, and Readville.

ENROLLMENT BY NEIGHBORHOOD

JAMAICA PLAIN HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
JAMAICA PLAIN		376	49%
ROXBURY		208	27%
DORCHESTER		56	7%
CODMAN SQUARE	14		
FIELDS CORNER	1		
GROVE HALL	29		
UPHAMS CORNER	12		
SOUTH END		15	2%
ROSLINDALE		14	2%
(NO DATA AVAILABLE ON 10% OF THE STUDENT BODY)			
TOTAL ENROLLMENT		774	

ENROLLMENT BY NEIGHBORHOOD

JEREMIAH E. BURKE HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
DORCHESTER		503	54%
CODMAN SQUARE	88		
FIELDS CORNER	18		
GROVE HALL	265		
UPHAMS CORNER	132		
ROXBURY		218	23%
SOUTH END		138	15%
MATTAPAN		20	2%
JAMAICA PLAIN		18	2%
BACK BAY		18	2%
TOTAL ENROLLMENT		941	

ENROLLMENT BY NEIGHBORHOOD

ROSLINDALE HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
ROSLINDALE		702	52%
WEST ROXBURY		384	29%
JAMAICA PLAIN		99	7%
MATTAPAN		40	3%
DORCHESTER		35	3%
CODMAN SQUARE	12		
FIELDS CORNER	1		
GROVE HALL	17		
UPHAMS CORNER	5		
TOTAL ENROLLMENT		1339	

84% of Roslindale's enrollment is from local district students: Roslindale, West Roxbury, and Mattapan.

ENROLLMENT BY NEIGHBORHOOD

SOUTH BOSTON HIGH SCHOOL

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
SOUTH BOSTON		1042	58%
DORCHESTER		685	38%
CODMAN SQUARE	17		
FIELDS CORNER	30		
GROVE HALL	5		
UPHAMS CORNER	633		
TOTAL ENROLLMENT		1787	

R20 E3
Educational Planning Assoc., Inc.
Survey of high schools of Boston to determine up-to-date capacities, etcetra.

DATE	ISSUED TO

ENROLLMENT BY NEIGHBORHOOD

BOSTON HIGH SCHOOL (WORK-STUDY PROGRAM)

NEIGHBORHOOD		NO. ENROLLED	% OF TOTAL ENROLLMENT
DORCHESTER		87	21%
CODMAN SQUARE	31		
FIELDS CORNER	10		
GROVE HALL	20		
UPHAMS CORNER	26		
ROXBURY		55	13%
SOUTH BOSTON		55	13%
EAST BOSTON		40	10%
JAMAICA PLAIN		28	7%
CHARLESTOWN		24	6%
ROSLINDALE		11	3%
SOUTH END		9	2%
BRIGHTON/ALLSTON/BROOKLINE		8	2%
(NO DATA AVAILABLE ON 17% OF THE STUDENT BODY)			
TOTAL ENROLLMENT		409	

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